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Current Issue - - - - - - - - $ .15
Three months - - - - - - - - $2.00
Six months - - - - - - - - - - $3.00
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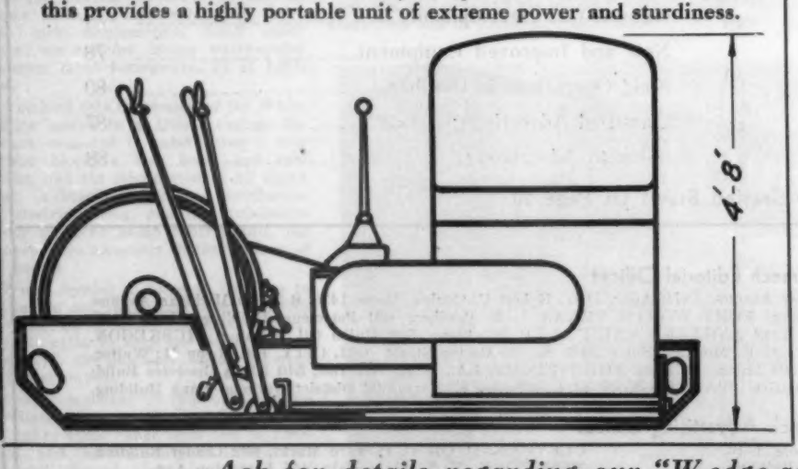

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With Adequate Legal Authority Oil Industry Should Help to Rigidly Enforce Curtailment

By ANDREW M. ROWLEY

THERE is every reason why oil men should view the outlook with optimism and no good reason why their hopes for better times cannot be realized fully within a comparatively short time. Selfishness on the part of a very small minority may present difficulties to a quick achievement of the goal but the large part of the business, knowing basic conditions are good and the opportunity for further betterment is at hand, should use every effort possible at this time to make everyone do his part in carrying out the plans known to be necessary for complete stabilization.

The industry now knows what it may reasonably expect in the way of consumption until next April, the economics report of the Federal Oil Conservation Board and the American Petroleum Institute being accepted generally as a good barometer of conditions. It has been told frankly it has failed to heed warnings given it in the past regarding the accumulation of burdensome stocks of motor fuel and the reports mentioned show the result. Definite figures are given showing what the production and refining branches of the business must do to get back to a solid foundation. These figures are not questioned so there is absolutely no excuse for any hesitancy in adjusting operations to fit conditions known to exist. Failure to immediately adjust these operations can mean only one thing—those so failing are entirely selfish and calloused to the welfare of the industry as a whole.

Crude oil production must be curtailed further and runs to refineries must be restricted appreciably. Gasoline stocks are too high and must be lowered. Coming right down to the fine point these matters can be adjusted very quickly. Proration in a great part of Texas has been a joke. This statement is not made in criticism of operators or state authorities. It is admitted the doubt which existed prior to the enactment of the market demand law in Texas about the legality of proration orders resulted in many operators almost entirely ignoring such orders. But the new law in Texas is held to be constitutional by the oil industry's best legal minds. The industry should get behind the Texas Railroad Commission and see that its orders are enforced and that there is no "fudging". And publicity with names should be accorded refiners who fail to curtail runs and continue to pile up stocks of gasoline. As Sir John Cadman remarked at Houston last week, "It is stupid waste and unsound business to produce two barrels of crude oil or manufacture two barrels of gasoline when the market will absorb only one."

Crude Oil Production in the United States

Estimated daily average production for the week ending November 19 and a comparison with previous week and one year ago, follows:

	Nov. 19	Nov. 12	Nov. 21, 1931
Oklahoma—			
Oklahoma City	73,830	97,040	192,210
Seminole-St. Louis	111,235	97,965	156,985
Remainder of State	202,495	202,230	209,120
Total Oklahoma	387,560	397,235	558,315
East Texas—			
Lathrop	136,662	134,893	116,942
Kilgore	106,038	104,355	127,584
Joiner	112,985	111,704	126,685
Total East Texas	355,685	350,952	371,211
West Texas	164,847	154,510	202,434
North Central Texas	72,455	72,647	83,129
Texas Panhandle	45,605	45,961	62,484
East Central Texas	49,220	49,386	56,845
Gulf Coast Texas	120,866	133,027	120,056
Southwest Texas	58,239	56,679	64,985
Total State of Texas	866,917	863,162	961,144
Kansas	96,720	95,640	104,410
North Louisiana	29,500	30,460	29,570
Gulf Coast Louisiana	36,395	37,582	32,425
Arkansas	33,755	33,875	37,750
Eastern Fields	123,000	121,000	120,000
Rocky Mountain area	74,286	75,149	95,379
California—			
Santa Fe Springs	56,000	57,750	62,500
Long Beach	70,000	67,500	74,750
Playa Del Rey	13,500	14,000	22,550
Elwood	13,300	13,000	23,500
Kettleman Hills	60,000	63,000	58,000
Remainder of State	256,200	257,750	262,700
Total California	469,000	473,000	504,000
Total United States	2,117,133	2,127,103	2,442,993

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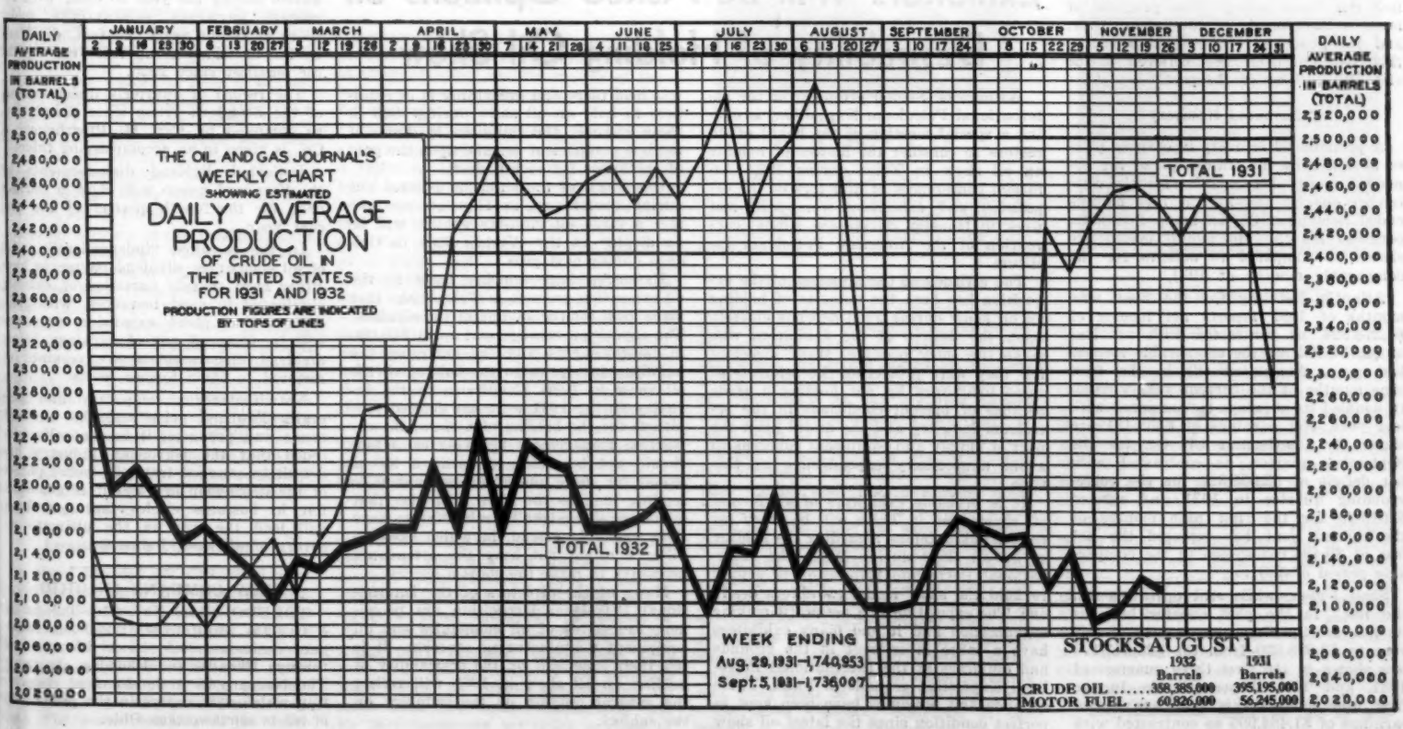

More Equipment Buying Anticipated as Earning Position of Industry Shows Improvement

By A. E. MOCKLER

New York Bureau, The Oil and Gas Journal

NEW YORK, Nov. 21.—Substantial improvement in the earning position of many units in the petroleum industry has developed during the third quarter of this year, and further progress in this direction is anticipated for the closing quarter, leading to a belief that the industry will shortly resume its program of refinery expansion and field development interrupted by the worst phases of the depression. Many oil companies have definitely emerged from "the red" during the past quarter, while others, whose losses had been running into seven figures, bettered their earning position to the extent that net deficits have been cut to relatively small amounts.

With the progress of the industry with respect to planned new construction and plant improvement programs definitely hinging upon a restoration of profitable selling of crude and products, the third quarter results show definite promise of early acceleration of these programs, and an ending of the period of virtual stagnation which has gripped some divisions of the oil industry equipment trade in recent months.

The huge losses reported by many oil companies throughout 1931 and up to the middle of the current year were extraordinary in more respects than one. While a substantial part of these losses was chargeable directly to the business depression in which the oil industry has had its full share, losses shown by major and small companies alike have been greatly increased by the almost universal program of lease abandonments by producing and integrated companies during the past year and a half. While the writing off of these holdings has made a pronounced dent in the surplus accounts and earnings of these companies, it is felt that the economies effected in carrying charges and bolstering of working capital accounts have more than justified the losses taken. This program of lease abandonment is now about over, and the abnormal charges incidental to this reorganization are believed to be virtually a thing of the past.

Pronounced Recovery

A pronounced recovery in earning power is shown by the statements of the appended group of companies for the September quarter and for the nine months ended September 30. In many instances, earnings for the nine-month period are shown as compared to deficits for the comparable months of 1931.

Atlantic Refining for the first nine months of 1932 reports net income of $4,274,924, as contrasted with net loss of $2,771,363 for the comparable months last year. Associated Oil in the first nine months of the current year virtually doubled its earnings as compared with last year. Net earnings of $358,451 are shown by Continental Oil Co. for the September quarter, as contrasted with net deficit of $2,955,322 for the corresponding quarter in 1931 and net of $101,949 for the first nine months of the current year has replaced the net loss of $9,484,163 shown in the comparable period of 1931.

Shell Union, while still operating "in the red," in the past quarter has cut its loss for the first nine months of this year to $3,098,020 from the $23,641,126 loss shown in the first three quarters of 1931, and Tide Water Oil Co. in the first nine months this year has shown earnings of $1,484,995 as contrasted with net loss of almost an equal amount in the first nine months of 1931.

COMPARATIVE EARNINGS OF TWENTY COMPANIES

Company—	Net earnings after charges and taxes — 3 months ended Sept. 30 — 1932	1931	First 9 months — 1932	1931
Amerada Corp.	$405,428	*$489,335	$957,972	*$968,060
Atlantic Refining	1,063,100	1,341,600	4,274,924	*2,771,363
Associated Oil	1,307,712	747,746	2,666,190	1,359,054
Barnsdall	*108,702	*723,053	*463,643	*2,538,551
Col.-Beacon	*709,565	*17,009	*1,830,371	*1,881,029
Continental	358,451	*2,955,322	101,949	*9,484,163
Darby Petroleum	*61,556	*92,264	56,380	436,198
Houston Oil	*173,635	*410,718	*295,220	51,494
Lion Oil	13,253	*68,805	3,602	*409,120
Phillips	1,186,698	263,900	374,206	*2,410,253
Seaboard Oil	237,388	194,471	613,198	72,480
Mid-Continent	*212,013	*1,252,998	*943,907	*4,154,730
Shell Union	*162,593	*2,681,620	*3,098,020	*23,641,126
Shell Pipe Line	†2,151,977	†3,403,578	†8,536,318	†10,928,011
Skelly Oil	*228,979	*272,500	1761,259	*1,941,624
S. O. California	5,096,842	6,297,819	12,013,385	11,941,787
Texas Pacific	*30,324	*396,859	235,959	*1,087,096
Tide Water	325,192	529,619	1,484,995	*1,473,952
Tide Water Associated	1,295,670	1,253,174	3,495,370	175,710
Union Oil	1,250,000	1,200,000	2,750,000	3,200,000

*Net loss. †Before Federal tax. ‡Including nonrecurring profit of $1,045,606 on sale of properties.

STANDARD OIL CO. DISBURSEMENTS

	First quarter	Second quarter	Third quarter	Fourth quarter	Total
1932	$46,501,052	$46,308,873	$43,868,463	.....	.....
1931	63,101,797	57,843,467	51,263,658	$48,530,230	$220,739,152
1930	66,637,168	68,555,901	68,271,015	83,012,644	286,536,728
1929	63,101,701	66,053,389	65,426,981	75,063,856	269,645,927
1928	46,927,670	57,594,206	50,068,192	62,050,257	215,740,325
1927	55,873,413	54,291,615	47,723,440	55,734,472	213,617,940
1926	49,580,317	50,618,451	46,427,278	62,685,548	209,311,594
1925	34,355,618	41,905,728	35,140,584	42,104,169	153,506,099
1924	34,975,367	40,699,592	34,712,310	40,000,286	150,388,555
1923	33,499,988	36,311,251	31,066,251	27,545,805	138,423,295
1922	28,206,068	29,205,349	28,628,099	43,000,349	129,039,865
1921	28,987,611	29,131,727	27,609,227	29,586,727	115,315,292
1920	26,796,606	27,313,396	29,804,557	31,861,824	115,776,383
1919	26,759,502	26,397,119	24,418,169	28,326,687	105,901,477
1918	26,483,747	26,759,002	26,204,915	24,035,252	103,482,916
1917	23,097,668	26,428,252	22,968,751	27,463,252	99,957,923
1916	22,179,055	30,406,454	21,980,168	24,062,168	98,627,875
1915	15,241,966	14,368,636	15,891,966	16,898,636	62,401,204
1914	17,904,636	16,426,306	14,430,636	14,931,306	63,692,874
1913	*55,652,423	15,552,096	15,213,746	21,377,096	*107,795,361
1913	10,220,396	11,983,746	13,190,396	16,393,096	51,786,634

*Includes $39,335,352 distributed by Standard Oil Co. of New Jersey from repayment of loans to former subsidiaries.

Standard Oil Co. of California, a consistent earner among the major companies, reports net of $12,013,385 for the first nine months of the current year, a slight increase over net for the comparable months of 1931.

Oil company earnings, in so far as the integrated units and strictly producing organizations are concerned, have been substantially affected by the low crude oil prices and curtailment in output prevailing during the greater part of the year. The posted price increases made last month, although not followed by all purchasing companies, are nevertheless expected to be reflected by improved earnings of producing companies and producing departments of integrated companies for the closing quarter of 1932, and these greater earnings are expected to be followed by liberalization of the purchasing budgets of these units, with a resultant increase in sales of field equipment for replacements, maintenance and new field operations. Drilling operations have been abnormally curtailed during recent months, and some slight increase in field operations is looked for, both in domestic and nearby foreign fields.

The accompanying table gives comparative earnings of a group of 20 oil companies selected at random, for the September quarter this year and last, and for the nine months' period in each year.

Dividends

Major companies in the industry have taken steps to strengthen their cash position through the discontinuance of dividend payments or the reduction of quarterly disbursements, only a few of the major companies having adhered to their regular dividend payment rates during the past year.

The dividend record of the Standard Oil group, as representative for the industry as a whole, shows a steady diminution during the year to date, with aggregate payments substantially under those of recent years. In fact, dividends by the Standard group this year will be the smallest since 1925.

The record of quarterly disbursements of the Standard group since dissolution, as compiled by Carl H. Pforzheimer & Co., is given in an accompanying table.

Indicated dividend disbursements by the Standard group will show a further drop for the fourth quarter of the current year.

In the so-called "independent" group of oil companies, dividend payments have either been sharply curtailed or entirely eliminated in most instances, with indications that plant expansion programs will be financed out of earnings before dividend disbursements are resumed or restored to their former levels.

Notwithstanding temporary and generally localized price setbacks on both crude and products, it is generally conceded that the petroleum industry has definitely emerged from the worst phases of the depression era and it is generally felt in business circles that petroleum will lead the way in the ultimate recovery of all basic industries.

Exhibitors Will Be Asked Opinions on Desirability of Holding Oil Show

William G. Skelly, president of the International Petroleum Exposition, is calling a special meeting of the board of directors to consider the matter of holding an oil show in Tulsa during 1933. Informal conferences of directors of the exposition and exhibitors were held last week in Houston during the annual convention of the American Petroleum Institute.

The attitude of the directors of the exposition has been the question of holding an oil show during 1933 depends entirely upon the desires of the exhibitors who make the show possible. Many directors felt they were protecting the interests of these exhibitors by not holding a show because of present conditions in the petroleum industry and the desire upon the part of supply and equipment concerns to avoid unnecessary expenditures at this time.

It is probable exhibitors of all former oil shows held in Tulsa will be asked for their frank opinions regarding the holding of an oil show during 1933. The International Petroleum Exposition is willing to hold the show if the exhibitors desire one. The exposition is a nonprofit making organization and it and many exhibitors have a large investment in the grounds and buildings at the International Petroleum Exposition grounds in Tulsa. These grounds and buildings have been kept in perfect condition since the latest oil show was held there and everything is in readiness to hold an oil show during 1933 in these grounds and buildings in Tulsa if there is a sufficient demand upon the part of exhibitors for such a show.

One angle of the situation pointed out during conferences in Houston was the fact a large oil industry exhibit will be on display at the World's Fair in Chicago during next year.

Extensive improvements made in the oil exposition grounds in Tulsa make that place ideal for the holding of the oil show. The exposition management spent $70,000 in improvements and for enlarging the buildings just prior to the holding of the oil show in 1930. Conditions in the industry during 1931 were not deemed propitious for the holding of a show, the exposition management believing exhibitors should not be asked to spend a lot of money for space and expenses incident to sending men to the show and also that oil companies might be reluctant to have their employes attend, in which case exhibitors would not have the attendance necessary to make the show a success.

Many of the directors of the International Petroleum Exposition are prominent executives of oil companies and oil equipment manufacturing concerns. It is felt their judgment on the desirability of holding an oil show in 1933 will reflect the general opinion of the industry on the subject.

NEW COMPANY IN OHIO

TOLEDO, Ohio, Nov. 21.—Toledo Oil & Gas Co., capitalized at 250 shares no-par common stock, was incorporated through Rhoades and Rhoades, attorneys. The company is a development corporation which will engage in the production of oil in northwestern Ohio.

A. P. I. Convention Had Many Interesting Phases With Tense Period of Political Maneuvering

By ANDREW M. ROWLEY

The thirteenth annual convention of the American Petroleum Institute which closed last Thursday night in Houston, Tex., will be remembered for a number of things. It probably was the largest attended meeting the Institute ever held, for while the final registration was 1,865, just 125 more than at the meeting in Chicago last year, a large number of those at the convention, including many from distant points, did not register. There were two general sessions instead of the one usually held, which added to the popularity of and interest in the meeting as a whole. The group sessions of the Production, Refining and Marketing Divisions were especially well attended and the subjects discussed seemingly of greater widespread interest and more pertinent to the problems being confronted at this time. The economics reports of the Institute and the Federal Oil Conservation Board were available early so that all had a good opportunity to analyze the reports and discuss the situation shown so clearly by these reports. And there was an intensely interesting and, at times rather exciting, display of politics in the consideration of and decision relating to the matter of continuing the policy of paying a salary to the president and the selection of the president.

Election of C. B. Ames

The election of C. B. Ames, vice president, director and member of the executive committee of The Texas Corporation, as president of the Institute seemed to ease somewhat the tenseness of the situation prevailing at the convention for three days. Judge Ames is liked universally. He is known to be capable, experienced, unaffected, easy to talk to and diplomatic. The attitude of Judge Amos L. Beaty, president of the Institute during the past year, did much to smooth the troubled waters. Judge Beaty had many strong supporters for re-election but after the vote showed Judge Ames to be the selection, Judge Beaty asked that all put their shoulders to the wheel and co-operate wholeheartedly in the efforts to solve the problems confronting the industry and of such great importance in stabilizing conditions and permitting the oil business to more quickly return to normal times. The fine spirit in which Judge Beaty took the election made him many friends.

All other officers of the Institute were re-elected as follows: Vice president at large, H. R. Gallagher, Consolidated Oil Corp., New York; vice president for production, Charles F. Roeser, Roeser & Pendleton, Fort Worth; vice president for refining, D. J. Moran, Continental Oil Co., Ponca City; vice president for marketing, W. T. Holliday, Standard Oil Co. of Ohio, Cleveland; executive vice president, W. R. Boyd, Jr., American Petroleum Institute, New York; treasurer, Axtell J. Byles, Tide Water Associated Oil Co., New York; and secretary, Lacey Walker, American Petroleum Institute, New York.

Await Boyd's Acceptance

Mr. Boyd has not yet accepted his re-election as executive vice president and, it is my understanding, he will not make a decision on the matter until early in December. It is felt a more clear-cut division of the duties of the paid president and paid executive vice president might solve some of the difficulties involved. For years members of the Institute have looked to Bill Boyd to "run the organization." That really has been his job and every director and member is loud in his praise of the manner in which the Institute has been conducted and the efficiency displayed. There has been no complaint about Mr. Boyd's work.

A majority of the directors believe if the president of the Institute devotes his whole time to the Institute he should be paid a salary commensurate with the duties and responsibilities involved. The matter of the money involved in the salary and expenses did not seem to constitute an important factor in the consideration of the policy of paying the president. It apparently was clearly a question of policy and the matter of having what many considered "two bosses" for the organization.

—Photo by Blank-Stoller, Inc.

C. B. AMES

There was a feeling when the Institute a year ago decided to pay its president a full-time salary that there was need for a capable man who would devote his whole time to matters affecting the welfare of the petroleum industry. Questions of policy relating to the industry as a whole and to the different areas within the oil business; legislation; the broad problem of conservation for the whole country and individual areas; and such matters as would necessitate many conferences throughout the United States, individual contacts, and discussions of these questions with oil men, representative public citizens, state and Federal authorities and others interested—these matters certainly provide one great big job for the best man the petroleum industry can get.

Division of Duties

Whether this was the plan of the directors a year ago and whether it still is their plan following their action in Houston, I cannot say definitely, but it seems such an outline of the duties of the paid president would keep Judge Ames fully occupied during the next year. And the operation of the Institute itself with its large membership, its more than 150 active committees, and its very numerous activities relating to production, refining, marketing, taxes, tax evasion, etc., certainly provides a job which will keep Bill Boyd busy more than five days a week.

It is greatly to be regretted dissension about the matter arose at Houston and assumed such proportions. It cannot help the Institute. This is no time for any division either in the ranks or among the leaders. The oil business has a wonderful opportunity to move ahead and "get somewhere quickly." It is to be earnestly hoped every member, director and official of the American Petroleum Institute puts aside his personal feelings and co-operates with every other member, director and official in working towards stabilization and better times in the oil business.

Judge Ames will resign his connections with The Texas Corporation. He has been connected with that company for many years. He had charge of the legal department of the company in Oklahoma for years and went to New York in 1923 as general counsel. In 1919 and 1920 he was assistant to the Attorney General of the United States in charge of the anti-trust division.

W. R. BOYD, JR.

Convention Was Beneficial

Probably more real benefit was derived by those in attendance at the Houston meeting than at many previous gatherings. As before stated all sessions at the convention were well attended and the discussions of the prepared papers were especially instructive. But fully as much good came from the informal discussions which were in progress morning, afternoon and night throughout the Rice Hotel and the numerous other hotels in the downtown section where those at the meeting were registered. Proration; conservation; production, refining and marketing practices, evils and problems; taxes and tax evasion; improvements in equipment and in the uses of equipment; and a hundred other subjects were discussed by men from different sections of the country and a better understanding was had of these problems and what must be done to remedy them.

Sir John Cadman, chairman of the boards of the Anglo-Persian Oil Co. and of the Iraq Oil Co., added to the spirit of optimism generally prevalent at the meeting. In discussions outside his prepared speech, he deprecated what he called the "stupidity of waste," saying "it is unsound to waste a natural resource and to flood the world market with more oil than can be consumed. If the world can use one barrel of oil and you produce two, what is the result—low prices and waste. The industry must produce goods at a minimum of cost. It must have due regard for the consuming public. When it has this due regard for the public and provides that public with products at a cheap price there will be no governmental criticism or regulation." He pointed out that in the world picture "distressing and apalling in many places, the oil industry is the one bright spot and is leading all other industries back to normal conditions."

Important Committee Named

The board of directors adopted a resolution calling for immediate creation by the board of an "American Petroleum Industries Committee" to formulate policies and to supervise Institute activities relating to taxation of petroleum products and kindred matters. The resolution, presented in the form of the report of a special committe, of which W. T. Holliday, Standard Oil Co. of Ohio, Cleveland, Ohio, was chairman, follows:

LACEY WALKER

"Be it resolved: That the board of directors immediately appoint a committee of seven, to be known as the 'American Petroleum Industries Committee.' The said committee to be subject to the control of and to report to the board of directors and to be elected or appointed annually by said board.

"It shall be the duty of said committee to formulate policies for and to supervise, control and direct all Institute activities in matters of gasoline or other petroleum products taxation, its evasion, diversion, increase or decrease, substitutions of petroleum products, and any and all legislation affecting said matters or other matters related to the distribution of petroleum products.

"The committee shall, so far as pos-

(Continued on Page 31)

Refiners Discuss Papers on Research at Houston; New Methods and Tests Win Attention

By W. T. ZIEGENHAIN

HOUSTON, Tex., Nov. 21.—Despite the past year of adverse economic conditions in the refining branch of the industry, research work has not been greatly curtailed if one is to judge from the papers and discussions presented before that division during the convention of the American Petroleum Institute. New methods for manufacturing lubricating oils, a procedure to test extreme pressure lubricants, the corrosion of equipment and means of expanding the fuel oil and natural gasoline markets were the subjects which developed the greatest amount of discussion.

The fact that automotive engineers claim they are handicapped in making certain improvements in their cars because satisfactory lubricants are not available probably intensifies and hastens along the research being done on the subject of lubrication.

The trend toward making refining a true manufacturing procedure, instead of simply one of separating the various components of crude oil as supplied by nature, was given impetus this year in at least three directions. The discussion which followed the various papers showed that refiners are striving to advance economical means of converting straightrun gasoline and naphthas into motor fuel of high octane value by means of cracking or reforming; to make more stable and satisfactory motor lubricants by separating the paraffin hydrocarbons from the naphthenic by the use of selective solvents, and to produce extreme pressure lubricants by adding an outside material to oil to permit the use of the high pressure and high speed gears automotive engineers say they are ready to adopt to improve car performance.

Lubricating Oils

Offered as a means of making a lubricating oil which "is an improvement over nature," W. S. Ferris of the Atlantic Refining Co. described the use of nitrobenzene as a selective solvent for making motor oils of exceptionally high quality and special oils such as dielectric oils, and refrigerator lubricants. This paper was published in The Oil and Gas Journal, November 17, 1932, page 65. Dr. R. E. Wilson, of the Standard Oil Co. (Indiana), asked whether the use of acid was necessary in treating oils processed as outlined by Mr. Ferris. He also asked whether there was an appreciable loss in nitrobenzene and loss of color in the treated stock due to processing it in this manner. Mr. Ferris said an acid treatment is not necessary. In commenting on the nitrobenzene losses, Mr. Ferris said that through a proper control of contacting temperatures there was no loss of color in the petroleum component and subsequent separation between the stock and the ntirobenzene was complete. He showed that temperatures above 350° F. were necessary to effect a reaction between the nitrobenzene and the stock and that this temperature was considerably higher than that to which the two were subjected during contacting. Mr. Ferris suggested the use of a relatively high vacuum with steam to remove the last traces of nitrobenzene from the stock to avoid darkening of the stock. The above findings were based upon the use of iron containers as well as glass, so it was made apparent that a commercial application of the process would not incur the use of special surfaces on the reaction vessels.

Another process which involved the use of selective solvents was described by O. P. Cottrell, of the Edeleanu Co., Ltd. The process combines the use of liquid sulphur dioxide in the same general manner as that being used in the Edeleanu plants for the manufacture of low sulphur kerosene and special oils with the exception that varying percentages of butanol are used as a co-solvent.

Extreme Pressure Lubricants

Although relatively little discussion developed following the reading of papers on the subject by Dr. O. C. Bridgeman of the Bureau of Sandards (The Oil and Gas Journal, November 17, page 50) and H. R. Wolf of the General Motors Research Laboratories (The Oil and Gas Journal, November 17, page 58), such comments as were made clearly indicated that the problem is a long way from solution. The work now being undertaken is to find a satisfactory laboratory test method to determine what constitutes a satisfactory extreme pressure lubricant. Until this is done, it will not be possible to say definitely whether an oil is compounded correctly except through its actual use in the car. This fact is holding automotive engineers from using the improved gears they have developed, and they further state they will not feel justified in using them until satisfactory extreme pressure lubricants are available at the filling stations of at least the larger oil marketing companies.

The Bureau of Mines is receiving the co-operation of refining companies and automobile manufacturers in hastening the solution of this problem of getting a suitable test procedure, but, obviously, it is a difficult one.

Corrosion of Equipment

Corrosion, that expensive factor in refinery maintenance, came in for its share of discussion. Following papers on that subject by T. D. Tifft of the Sinclair Refining Co., N. B. Musser of the Sun Oil Co. and S. S. Shaffer of the Humble Oil & Refining Co. (The Oil and Gas Journal, November 17, page 88), E. S. Dixon, metallurgist for The Texas Company, discussed the experience of his company in the use of paints and metal coatings to combat corrosion.

Natural Gasoline

In that portion of the discussion suggesting ways and means of expanding utilization of those petroleum products which are proving most burdensome on the market, G. G. Oberfell of the Phillips Petroleum Co. presented a most complete argument for the increased use of natural gasoline. His analysis of trends in refining practices were correlated with those of natural gasoline manufacturers which in some cases are opposing, and he stated that unless the two industries plan companion programs in the matter of marketing both will suffer greatly in the end. Mr. Oberfell's paper was printed in The Oil and Gas Journal, November 17, page 97, and it will be remembered that what was stressed mostly was that "natural gasoline will find a market outlet."

Following Mr. Oberfell's paper, F. L. Chase of the Lone Star Gasoline Co. chose to inject a warning to refiners by saying that "unless the price of the 26-70 grade of natural gasoline is kept at a level at least 70 per cent of the price for the middle grade of refinery gasoline, natural gasoline manufacturers will stabilize their production to the required vapor pressure to be sold direct to jobbers as a motor fuel." He also stated that up to this time natural gasoline manufacturers had chosen to interest the refiner in their products first and preferred to continue to carry out a co-operative plan by which all natural gasoline would be absorbed through the refinery or by the marketing branch of the refining organization by shipping it to blending stations, but Mr. Chase said, "So far, the co-operation has all been one-sided."

He said that many refiners have chosen not to investigate the merits or the economies in the increased use of natural gasoline and had dispensed with the question by thinking the natural gasoline manufacturers were simply asking them to buy out of the goodness of their hearts. Mr. Chase said he wanted to eliminate any such plea for the use of natural gasoline. He said the purchase of natural gasoline by the refiner should be based only upon the fact the refiner could make a profit for himself through its use.

Furnace Oil

Without further discussion, W. S. S. Rodgers of The Texas Company, chairman of the meeting, called for the reading of a paper discussing the possibility of extending the market for another petroleum product, furnace oil. This paper, "Economic Development of Furnace Oil and the Effect on Burner Design," was read by A. E. Pew, Jr., of the Sun Oil Co. Mr. Pew discussed the various types of burners and pointed out that the trend is toward the use of heavier oils. Only one exception was made to the many facts presented in the paper and that exception was made by Dr. R. E. Wilson of the Standard Oil Co. (Indiana). Doctor Wilson objected to this statement by Mr. Pew: "Cracked gas oils are characterized by heavy gravities, as compared to uncracked gas oils of the same boiling range and viscosity. They have a higher ratio of carbon to hydrogen than is the case of straight gas oils and, accordingly, have a higher heat content per gallon. Gas oils which have been cracked to produce the maximum economic amount of gasolines have few outlets except as fuel oils, either being used in blends or straight products, depending on conditions. A domestic heater designed to use cracked gas oils would, therefore, from the refiner's viewpoint, compete for its fuel against fuel oil uses, and not against gasoline uses. It would therefore be on a better basis from an economic viewpoint. Cracked gas oils can be made with identical boiling points, low viscosity and freedom from coke or foreign matter, as is the case of the uncracked furnace oils. The difference would lie in the heavier gravity and in a higher ratio of carbon to hydrogen with greater heat content per gallon. The variation in air required per gallon to produce completed combustion between a light gravity No. 1 oil and a high carbon ratio cracked distillate might be as much as 10 per cent."

Doctor Wilson championed the use of cracked furnace oils to the extent that he did not agree that the 10 per cent air variation mentioned would be as important as might be understood from the paper. He pointed out that most household oil burners are designed to bring in excess air into the combustion chamber. Also, and most important, is the fact that the air inlet is adjusted to the B.t.u. output and because cracked fuels of a higher carbon to hydrogen ratio produce more heat per gallon, the variation in the air required would need vary only about 1 per cent.

Doctor Wilson also mentioned the fact that sometimes trouble was being experienced by consumers on the basis that one fuel could be used satisfactorily and another one could not, when both fuels were of the same classification or grade. He said that in the design of the burner itself, the Underwriters Laboratories and the burner manufacturer sometimes use a better fuel within a given range of specifications for the chosen grade than could be guaranteed if the consumer were to purchase his oil by using the fuel oil classification alone. Thus a No. 1 or Nos. 2, 3, etc., oil might vary in quality sufficiently to mislead the designer unless he anticipates that the customer uses the poorest fuel just meeting the respective specifications for the particular grade.

Heavier Fuels Discussed

Then the heavier fuels came up for discussion. A paper read by R. P. Russell of the Hydro-Engineering Chemical Co. offered an estimate of the potential outlet for heavy fuel oil but cited certain limitations to the program of industry replacing coal-burning or gas-burning equipment with fuel oil. E. P. Bailey of the National Airoil Burner Co. said he thought the paper had portrayed a line of thought that was too pessimistic. Mr. Bailey was emphatic in denouncing the practice of oil men who lead industrialists to think that the oil reserves are being depleted at a serious rate or that fuel oil prices can be expected to be raised to where the use of fuel oil would be out of the question. He criticized the loose use of the term, "uneconomical uses for oil." Oil consumed under boilers or as fuel in any manner in which it is supplying energy which is being consumed was construed by Mr. Bailey as an economical use for oil. He contended that the oil men are not taking advantage of their opportunities to dispose of a material of which there is too much. He said: "You do not seem to be willing to expand the market because you persist in not offering any kind of a guarantee to prospective users in regard to the future price. If you would do what I am told one very large refiner and marketer has recently done, I am sure we could convince industrialists they should convert their coal-burning equipment to oil-burning. I refer to a three-year contract recently signed by a large refiner guaranteeing to supply fuel oil at an eastern point at 75 cents a barrel."

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have been started before the State Supreme Court in the Douglas Oil Co. vs. State (Whiteside case), California Co.

WHITESIDE CASE ARGUMENT

AUSTIN, Tex., Nov. 21.—Arguments case and Permian Oil Co. vs. Smith, involving what attorneys said represents ownership of a third of a billion dollars of property in the Yates oil field and oil already produced. The case involves adoption of surveys to locate vacancies along the west or the east side of Block 194 affecting claims of over 600 persons to ownership and lease right in the land.

S. C. KINCADE KILLED

S. C. Kincade, 30, assistant petroleum engineer for the Humble Oil & Refining Co., was instantly killed and U. F. Jackson, another employe of the company, was seriously injured on November 14 in a gas explosion at a well in the Hobbs Field, New Mexico.

Production Men Consider Problems Relating to Conservation and Recovery of Oil and Gas

By NEIL WILLIAMS

HOUSTON, Tex., Nov. 19.—Discussion of problems and phases of conservation of oil and gas reserves and lifting energy featured the group sessions of the division of production of the American Petroleum Institute at its thirteenth annual convention here this week. An important part of the program also was devoted to a study of certain drilling and production practices with a view toward obtaining greater efficiency and economy in these operations.

All sessions of the production division were unusually well attended and more than passing interest was displayed by all present. It was very evident that all realized the importance of the subjects under discussion and the need of co-operation among members of the industry at this time.

The opening group session of the production division was held Tuesday night with W. B. Whiteford, vice president and general superintendent of the Barnsdall Oil Co. of Tulsa, presiding. At this meeting a discussion by E. V. Foran, consulting engineer, on "Deep Well Completion Practice in Reagan County, Texas" created considerable interest. In this Mr. Foran brought out some facts concerning conditions in the deep producing horizon of the Big Lake Field which are radically different from anything which has ever been encountered before and which lead the way to new theories as to what may be expected in future deep sand development elsewhere.

Usual Practice Reversed

Completion practices in Reagan County are peculiar to that field, Mr. Foran explained. In fact, the usual order of completion is completely reversed and, literally speaking, wells now are being completed from the "bottom up rather than from the top down." That is, in all other fields so far it is customary to produce from the top of the pay while at Big Lake developments and study of conditions have shown that wells there should be drilled first to as close above the water table as possible where they should be completed and then gradually be plugged back as the water table rises.

As told by Mr. Foran the producing horizon of the Big Lake Field consists of two separate zones in the same lime formation and in direct communication. The upper zone, which is from 100 to 200 feet in thickness, carries a light, water white oil of around 62 gravity which rests in immediate contact on the lower zone which carries a brown oil of around 40 gravity. The level or plane of separation between the two zones is at approximately 8,725 feet whose measurement or determination is calculated so closely because of the abruptness of transition from water white fluid to the brown oil. The original water table is estimated to have been around 9,000 feet and at present is known to be between 8,709 and 9,000 feet.

Gas-Oil Ratios

The further peculiarity of the condition is that in the water white zone the gas-oil ratio is almost uniformly constant between 8,000 and 10,000 feet per barrel no matter at what depth wells are completed or under what conditions they are produced or whether with or without tubing. Upon penetration of the lower zone there is an abrupt drop in the gas-oil ratio of production to around 4,000 feet per barrel, which declines to as low as 1,700 feet per barrel, according to depth in the zone, this change being as sudden as the line between the water white zone and the brown oil zone. While color of the oil and gas-oil ratio changes abruptly from one zone to the other, there is, however, a gradual drop in gravity of the oil extending from the top to the bottom.

Mr. Foran confined himself to facts and did not attempt to offer a theory of how such a condition of equilibrium could exist with two distinct zones of fluid of different characteristics without a break in formation between them. However, during the discussion he called upon William N. Lacey of the California Institute of Technology for an opinion. Mr. Lacey offered a theory which he stated was somewhat revolutionary but that in the development of oil at great depths the industry might have to entertain entirely new conceptions of reservoir conditions. He stated that while we ordinarily think of gases and oils being held in one solution under pressure, this is true only up to pressures of around 2,000 pounds and at pressures of 2,000 pounds and up at relatively high underground temperatures there actually takes place a condition of distillation in which the lighter constitutents of the common pool in reality are forced out of solution to form the gaseous water white fluid which rests directly on top of the lower heavier ends as in the Big Lake Field. Such a theory also would explain the appearance of water in certain early wells completed in the water white zone at Big Lake. As some of the light ends of the oil were forced out of solution under the high reservoir pressure and temperature at Big Lake so some of the underlying water was vaporized, the wet vapors forcing their way up through the brown oil zone and into the water white zone where they found their way in condensate to the wells. It was pointed out by Mr. Foran that the reservoir pressure in Reagan County was around 4,000 pounds and the reservoir temperature around 175 degrees, which, if Mr. Lacey's theory were correct, would explain the condition.

Water in Upper Pay Zone

Before it was learned that the brown oil zone below the water white zone existed and when the field was looked upon only as a light gravity "gasoline" field the appearance of water in the wells was looked upon with alarm. Since the discovery of the lower zone the water has been one of the many puzzles of the field. The field produced for two years from the water white zone before it was found that the lower zone existed. First indication of its existence came when a number of the wells which were deeper in the pay than others and which had been producing for some time began to show a little color in the fluid, which was due to the rise of the brown oil zone fluid plane. After this several wells were deepened and were completed directly in the lower zone. After the wells went into the lower zone, the deeper they were drilled the lower would be their gas-oil ratio.

Mr. Foran explained that Big Lake operators had overcome many problems in completing wells in the lower zone. High pressures in the water white zone at first prevented penetration of more than a comparatively few feet into the top of the pay. In fact, the method of completion was to drill until the tools could no longer be kept in the hole. Mud penetration of the pay, the result of extreme weight and pressure of the mud at such depths, also was injurious and the column had to be unloaded with risk at intervals of from 40 to 60 feet. However, in continued development of the field, hydraulic control has been devised so that the drilling through the pay has been facilitated and without the injurious effect of mud. The latest development has been the working out of a method of completing a well to produce from both the water white and the brown oil zones at the same time with the two flows being kept separate.

Other Papers Presented

Two prepared papers were read and discussed at the same group meeting. Both of these were printed in full in the November 17 issue of The Oil and Gas Journal. They were "Subsurface Economies in Drilling Practice," prepared by Bruce Barkis, Rio Grande Oil Co., and R. D. Copley, Standard Oil Co. of California; and "Drilling Practices and Economies in the Oklahoma City Field," by K. A. Covell, Pure Oil Co., and C. P. Parsons, Halliburton Oil Well Cementing Co.

The Wednesday morning group session was devoted to a symposium of well spacing with Fred E. Wood, Standard Oil Co. of Indiana, presiding. A paper on the "Hydrodynamics of Reservoir Drainage and Its Relation to Well Spacing" was presented by H. T. Wilde, Jr., and T. V. Moore of the Humble Oil & Refining Co. This paper detailed the various reservoir conditions pertaining to drainage and worked out formulas for determination of proper well spacing. It also dealt with the mechanics of flow.

Another paper on "Drainage and Its Effect on Ultimate Yield" was presented by R. W. Phelps, consulting engineer. Mr. Phelps advocated a close spacing of wells to obtain the maximum recovery from the reservoir. While yield per well would be less, there would be a greater yield per acre. He offered charts to show the drainage area of individual wells under various spacings and maintained that under wide spacing there would be large areas undrained due to opposing forces of attraction.

J. J. Zorichak, Midwest Refining Co., Casper, Wyo., was not present and his scheduled paper on "Effect of Additional Wells on Ultimate Yield" was read. His paper explained well spacing in the Salt Creek Field and the effect on recovery of various wells. A report of the committee on the eastern area on the Bradford Field was read which showed that the most efficient spacing of wells could be predetermined in that field.

Model of East Texas Field

A feature of the meeting Wednesday night was an actual demonstration by model of the East Texas Field of the effect on ultimate recovery under several operating conditions. Three different conditions of flow were demonstrated; first, having gas wells shut in and oil wells controlled; second, having gas wells shut in and oil wells uncontrolled; and, third, having gas wells open and oil wells controlled. The demonstration proved the greatest recovery to be obtained by the first system. By the second method only a quarter of the oil was recovered and by the third method only an eighth of the oil. It was shown that slow withdrawal of oil regardless of condition was the most desirable operation.

Thusday morning's session was devoted largely to discussion of control of free gas areas of fields and pressure maintenance. H. N. Marsh, General Petroleum Corp. of California, presided. J. R. McWilliams, Skelly Oil Co., in his paper on "Importance of Free Gas Control in Maximum Oil Recovery," advocated segregation of gas wells and oil wells in the proration scheme with the possible complete shutdown and condemnation of free gas areas, the owners of free gas area leases and royalties to be compensated in some way by other operators for their loss. The legal entanglements of such a procedure were discussed in full by R. E. Hardwicke, counsel for the Texas Oil Conservation Association.

"Practical Benefits of Pressure Maintenance in Petroleum Production," a paper by William N. Lacey, California Institute of Technology, which was presented at this meeting, was printed in full in the November 17 issue of The Oil and Gas Journal.

John A. Ritter of the Sun Oil Co. offered a paper and charts on "Pressure Maintenance in East Texas," in which he detailed the effect the various proration allowables have had on reservoir pressures in that field. He showed that uniform and lowered withdrawal of oil had tended to equalize and maintain bottom hole pressure.

In connection with the paper read by Mr. Marsh, the group unanimously passed resolutions indorsing research work being done in pressure maintenance by Mr. Marsh and voted to continue the work. At the meeting, the group elected members of the General Committee of the Division of Production, names of whom together with members appointed by the president, are given elsewhere.

At the closing group session Thursday afternoon, presided over by W. W. Scott, Humble Oil & Refining Co., the following papers were presented: "Kettleman Development and Production Problems," E. G. Gaylord, Standard Oil Co. of California; "Merits of Tapered Flow Columns," John T. Hayward, Barnsdall Oil Co., and "Selection and Rating of Pumping Units," Bowman Thomas, Humble Oil & Refining Co. The first two papers were printed in full in the November 17 issue of The Oil and Gas Journal. In Mr. Thomas' paper, a standardization of rating of pumping equipment was advocated.

Colombia Oil Price Cut; Production Rate Reduced

Beginning this month, the new production rate and the posted price of crude oil from Colombia's only producing oil field, operated by Standard Oil Co. of New Jersey, represent 50 and 25 per cent reductions, respectively, from the maxima for this year.

If continued through 1933 this would mean a loss estimated at 1,000,000 pesos (about $940,000) of the government's revenues from oil royalties and pipe line and income taxes.

The price and production cuts reflect the effect of the United States tariff of 21 cents a barrel on imported crude oil, effective last June.

MARTIAL LAW HEARING

WASHINGTON, D. C., Nov. 21.—In a hearing the past week attorneys for Governor R. S. Sterling of Texas urged the United States Supreme Court to set aside the ruling of the eastern district of Texas Federal Court, which enjoined the governor from the use of the state militia to enforce the state oil proration act. Mr. Sterling was represented by former Governor Dan Moody and E. F. Smith. Luther Nickels and Josiah W. Bailey, Jr., of Dallas, represented E. Constantin and other operators who obtained the injunction.

Free Gas and Gas-Oil Ratio Important Factors in Regulation of Flow Rate and Recovery

By J. R. McWILLIAMS
Skelly Oil Co.*

In the normal development of an oil and gas pool a high percentage recovery of gas is practically assured regardless of methods of production, but the percentage recovery of oil, on the contrary, is primarily dependent upon the methods of production, particularly with reference to the manner in which the gas is produced. It is generally conceded that higher oil recoveries could be obtained if the production of oil were given primary consideration and gas secondary. However, in actual practice in most pools, there is no control of gas production because there is no incentive for the owner of wells in the gas cap area to control his gas production nor any apparent protection if he exercises such control. Yet, the owner of wells in the oil producing area is powerless to obtain a maximum oil recovery from his property unless the proper control is exercised over the gas production. Unquestionably, the major portion of the preventable physical waste occurring today in many of our flush oil fields is caused by an inadequate control over gas production and the immediate cause of this inadequate control is the insecurity of each owner's potential oil and gas reserves once a pool is tapped.

The situation is unique in that the gas owner usually has no adequate market for the gas he produces, although he generally can receive some revenue by stripping its gasoline content, but with no use for the residue gas it is consequently blown into the atmosphere. The return is pitifully small compared to the potential value of natural gas, but the waste incurred consists not only of tremendous quantities of natural gas, but also of countless barrels of recoverable oil left underground elsewhere in the pool.

The remarkable part of the situation is that those oil wells which can effectively produce the maximum oil recovery from the pool as a whole do not directly require the free gas from the gas cap to obtain such recovery since it is believed that by far the larger portion of the oil recovered from a pool is moved to the wells because of water drive and/or the compressed gas originally dissolved in or associated with the oil. Therefore, free gas accounts directly for a very small percentage of the oil actually recovered. But the effectiveness of water drive and gas energy in decreasing the percentage of oil left underground depends upon pressure maintenance which is seriously affected by the withdrawal of large volumes of free gas from a pool. Therefore, the proper time to recover free gas from a pool is after the recoverable oil has been produced.

The original reservoir pressure is never maintained in a pool because water encroachment never fully compensates for oil and gas withdrawal, and, therefore, pressure maintenance in practice means a slow rate of reservoir pressure decline unless gas is injected. Therefore, even if free gas were kept intact in a pool until the recoverable oil had been produced, the reservoir pressure would decline in the meantime and the result would be a spread of the gas cap, thereby causing less gas to occupy the porous space beneath each gas property and a fringe of semi-oil acreage originally surrounding the gas cap would also become a gas acreage. Normally, this fringe of semi-oil acreage would have inherently high gas-oil ratio wells and operation of such wells should be delayed similarly to that of the gas wells because their immediate and relatively small oil recovery would not increase the ultimate oil recovery from the pool as a whole due to their large gas withdrawal adversely affecting pressure maintenance, and, therefore, disproportionally decreasing the ultimate oil recovery from the strictly oil areas.

Compensation for Controlled Production

It is evident that delaying gas production from the gas cap and semi-oil areas would cause free gas owners to suffer some drainage in addition to delayed gas production, and that owners of semi-oil areas would suffer both oil and free gas drainage. But the increased oil recovery to the remaining owners in the pool would justify ample compensation for this drainage and delayed gas production. However, the problem of stipulating ample compensation to such owners is quite involved and difficult and legal complications are also evident.

The problem of compensating free gas owners for drainage and delayed gas production until the maximum oil recovery has been drained from a pool involves the following physical factors:

1. Volume of free gas originally under each tract and after the completion of the oil production program.
2. Gasoline content of free gas.
3. Volume of gas in solution in oil.
4. Additional oil recovered from each tract by restricting the free gas production.
5. Amount of free gas which has migrated from the gas cap and is produced with the oil from each tract.
6. Extent and effect of water encroachment.
7. Change in bottom hole pressure in the reservoir.

None of these factors can be determined with any reasonable degree of accuracy with the possible exception of the bottom hole pressure and gasoline content data, and consequently there is no mathematically accurate answer to the problem based upon full and correct physical data. Therefore, any answer to this problem must be of an arbitrary nature and even an arbitrary answer cannot be obtained until certain basic principles governing the compensation due the free gas owners are agreed upon.

Pinciples Governing Compensation

The following questions should be decided as the basis of these principles governing compensation to gas owners for drainage and delayed gas production until the maximum oil recovery has been obtained from a pool:

1. Is the owner of free gas acreage en-

*Before A.P.I., Houston, Tex.

American Petroleum Institute Increases Membership of Its Board of Directors to 77 in Session at Houston

The board of directors of the American Petroleum Institute now consists of 77 members, an increase of five over the number serving in 1932, the board at the annual convention last week in Houston deciding to enlarge its membership. Following is a complete list of the board for 1933:

Richard Airey, Asiatic Petroleum Co., New York.
C. B. Ames, The Texas Company, New York.
C. E. Arnott, Socony-Vacuum Corp., New York.
T. H. Barton, Lion Oil & Refining Co., El Dorado, Ark.
Amos L. Beaty, American Petroleum Institute, New York.
Howard Bennette, Western Petroleum Refiners Association, Tulsa.
B. B. Brooks, Consolidated Oil Royalty Co., Casper, Wyo.
R. A. Broomfield, Barnsdall Oil Co. of California, Los Angeles.
E. R. Brown, Magnolia Petroleum Co., Dallas.
John A. Brown, General Petroleum Corp., Los Angeles.
Floyd C. Brown, Continental Construction Co., Chicago.
E. J. Bullock, Standard Oil Co. (Indiana), Chicago.
Axtell J. Byles, Tide Water Associated Oil Co., New York.
Frank R. Coates, Henry L. Doherty & Co., New York.
W. N. Davis, Phillips Petroleum Co., Bartlesville, Okla.
Henry M. Dawes, Pure Oil Co., Chicago.
T. A. Dines, Midwest Refining Co., Denver, Colo.
O. D. Donnell, Ohio Oil Co., Findlay, Ohio.
J. Frank Drake, Gulf Oil Corp., Pittsburgh.
L. J. Drake, Union Tank Car Co., Chicago.
F. S. Fales, Standard Oil Co. of New York, New York.
W. S. Farish, Humble Oil & Refining Co., Houston, Tex.
W. H. Ferguson, Continental Oil Co., Denver, Colo.
W. S. Fitzpatrick, Consolidated Oil Corp., Tulsa.
H. V. Foster, Indian Territory Illuminating Oil Co., Bartlesville, Okla.
Jacob France, Mid-Continent Petroleum Corp., Tulsa.
Wirt Franklin, Wirt Franklin Petroleum Corp., Tulsa.
Frank B. Fretter, National Refining Co., Cleveland, Ohio.
H. R. Gallagher, Consolidated Oil Corp., New York.
John A. Geismar, National Supply Companies, Toledo, Ohio.
John L. Gray, Deep Rock Oil Corp., Tulsa.
S. A. Guiberson, Jr., Guiberson Oil Investment Co., Los Angeles.
Ben Harris, Oil Well Supply Co., Pittsburgh.
W. T. Holliday, Standard Oil Co. of Ohio, Cleveland, Ohio.
R. C. Holmes, The Texas Company, New York.
William F. Humphrey, Associated Oil Co., San Francisco, Calif.
H. L. Hunt, Tyler, Tex.
W. M. Irish, Atlantic Refining Co., Philadelphia.
Roy B. Jones, Panhandle Prod. & Ref. Co., Wichita Falls, Tex.
W. M. Keck, Superior Oil Co., Los Angeles.
K. R. Kingsbury, Standard Oil Co. of California, San Francisco.
C. H. Kountz, Sinclair Prairie Pipe Line Co., Tulsa.
George Legh-Jones, Shell Oil Co., San Francisco.
Ralph B. Lloyd, Independent Oil Producers Agency, Los Angeles.
F. A. Leovy, Gulf Production Co., Tulsa.
J. F. Lucey, Lucey Petroleum Co., Dallas, Tex.
W. C. McDuffie, Pacific Western Oil Co., Los Angeles.
L. L. Marcell, White Eagle Oil Corp., Kansas City.
J. H. Markham, Jr., Tulsa.
E. W. Marland, Ponca City, Okla.
E. J. Marston, Texas Pacific Coal & Oil Co., Fort Worth, Tex.
R. D. Matthews, Union Oil Co. of California, Los Angeles.
P. M. Miskell, Empire Oil & Refining Co., Tulsa.
E. T. Moore, Simms Oil Co., Dallas, Tex.
D. J. Moran, Continental Oil Co., Ponca City, Okla.
G. R. Nutty, Gulf Refining Co., Pittsburgh.
T. A. O'Donnell, Los Angeles.
J. Edgar Pew, Sun Oil Co., Philadelphia.
J. Howard Pew, Sun Oil Co., Philadelphia.
Frank Phillips, Phillips Petroleum Co., Bartlesville, Okla.
H. L. Pratt, Standard Oil Co. of New York, New York.
W. E. Pratt, Humble Oil & Refining Co., Houston, Tex.
E. B. Reeser, Barnsdall Corp., Tulsa, Okla.
C. F. Roeser, Roeser & Pendleton, Fort Worth, Tex.
L. P. St. Clair, Union Oil Co. of California, Los Angeles.
E. G. Seubert, Standard Oil Co. (Indiana), Chicago.
E. W. Sinclair, Consolidated Oil Corp., New York.
H. F. Sinclair, Consolidated Oil Corp., New York.
W. G. Skelly, Skelly Oil Co., Tulsa.
W. E. Smith, Standard Oil Co. of Kentucky, Louisville, Ky.
R. W. Stewart, Chicago.
Charles L. Suhr, The Pennzoil Co., Oil City, Pa.
Oscar Sutro, Standard Oil Co. of California, San Francisco.
W. C. Teagle, Standard Oil Co. (New Jersey), New York.
R. G. A. van der Woude, Shell Petroleum Corp., St. Louis, Mo.
J. W. Van Dyke, Atlantic Refining Co., Philadelphia.
J. C. Van Eck, Shell Union Oil Corp., New York.
J. A. Vickers, Vickers Petroleum Co., Wichita, Kans.

The executive committee to serve during 1933 follows: C. B. Ames, The Texas Company, New York; H. R. Gallagher, Consolidated Oil Corp., New York; Charles F. Roeser, Fort Worth; D. J. Moran, Continental Oil Co., Ponca City; W. T. Holliday; Standard Oil Co. of Ohio, Cleveland; Axtell J. Byles, Tide Water Associated Oil Co., New York; Amos L. Beaty, New York; R. C. Holmes, The Texas Company, New York; F. A. Leovy, Gulf Production Co., Pittsburgh; J. Edgar Pew, Sun Oil Co., Philadelphia; E. G. Seubert, Standard Oil Co. (Indiana), Chicago; H. F. Sinclair, Consolidated Oil Corp., New York, and W. C. Teagle, Standard Oil Co. (New Jersey), New York.

titled to compensation for delayed gas production prior to the time a bona fide market is available?

2. Is he entitled to compensation for the net value of the gasoline which could be economically stripped from his gas reserves prior to the time a bona fide market is available for the residue gas,

3. If a bona fide market for gas is available, is he entitled, on account of delayed gas production, to actual compensation for gas and gasoline sales as they would normally accumulate or, if not, then is he entitled to a fair rate of interest on such prospective sales? In other words, should the free gas in place be sold or rented to the oil producer?

4. Is he entitled to compensation for the gas and its recoverable gasoline content, and also recoverable oil from high gas-oil ratio areas which would migrate across property lines during the poriod of effective oil production from the pool?

5. Is he entitled to compensation for any portion of the additional oil which may be produced from the pool as a whole because of the pressure maintenance brought about by his delay in producing gas from his property and which would otherwise be left underground?

6. Is he entitled to any compensation for the lower lifting cost which the oil operator can effect because of this pressure maintenance?

Students of this waste problem are quite cognizant of the diversity of opinions which executives, lawyers and engineers express on these questions.

Some executives think the gas owner is entitled only to compensation for gas drainage and delay in gas production while others think he is also entitled to an ample portion of the additional oil which his delayed gas production permits.

Some lawyers are of the opinion that gas wells and high gas-oil ratio wells can probably be legally shut in without compensation to the owners if tangible evidence can be produced to show underground waste of oil because of their operation. The same attorneys are quite confident the courts would uphold such procedure if the proper owners were adequately compensated.

Engineers for the most part believe the gas owner is entitled to compensation for gas drainage, but that he should not be compensated for any additional oil produced from the oil areas because of pressure maintenance. Some of them insist the gas owner should not be compensated for gas which migrates from the gas cap, arguing that those practicing excessive gas drainage in the past have not been forced to compensate the owner of prolific oil acreage for the recoverable oil which migrated up-structure or was left underground by such malproduction practice; so why should the tables be reversed at this time when conizance is being taken of underground waste? Some prominent engineers are of the opinion that there should be no compensation to the gas owner and their viewpoint may be influenced by their inability to state what the compensation should be, due to the lack of necessary underground data.

The executive's viewpoint is probably influenced by expediency and the economics of the situation. The lawyer, undoubtedly, forms his conclusion from adjudicated controversies which have a bearing upon the situation. And the engineer probably attempts to take both of these viewpoints into consideration and in addition is influenced by his conception of underground physical conditions and the part energy plays in the production of oil.

Pressure Maintenance by Reinjection

One method of attempting a partial solution to this problem would be to reinject the residue gas produced with the oil into the gas cap, allowing the oil operators only sufficient fuel for operating purposes. The cost of compressing the gas to reservoir pressure would be borne by the operator who produced it. As a result, net drainage of gas from the gas acreage would be minimized because reinjected gas would practically compensate such owners for the gas which would migrate from their property due to the production from the oil areas of the pool. The owner of high gas-oil ratio wells would be economically forced to forego oil production from his wells and accept the status of the gas owner if the cost of recompressing gas to reservoir pressure exceeded the net revenue from the oil which he produced with the gas from his property. The theoretical conclusion of such a program for a pool would be the economical abandonment of gas compression for high gas-oil ratio wells as they gradually intruded toward the outer edges of the pool, and finally a predominantly gas pool would result after which gas production could be the primary objective and oil secondary.

Such a program appears complicated but its general adoption would have far reaching and curative effects upon a generally unsound and wasteful condition. The added increment of ultimate oil production from a pool should usually more than offset the additional expenditure involved. And economics would police the oil producer who ineffectively and wastefully used reservoir gas energy, because he would be forced to restore an equivalent amount of energy to the pool by recompressing the gas he produced.

It should be stated that the subject matter of this paper is intended to deal only with oil pools with free gas areas, and also such pools which develop gas caps after having produced for a period of time. It would not be applicable to the East Texas Field at this time because apparently all the gas is in solution with the oil. It is applicable to the Hobbs Pool in New Mexico, the Oklahoma City Pool in Oklahoma, and partially applicable to the Panhandle Pool in Texas and the Rits Canton Pool in Kansas. The Panhandle and Rits Canton Pools have areas of large gas reserves in the same horizons which produce oil. In these fields the owners of dry gas tracts can justly complain of wasteful production practices indulged in by the owners of oil tracts, especially those on the border line between the predominantly gas and oil areas. In these pools the high gas-oil ratio wells are the real offenders toward pressure maintenance.

Undoubtedly, the theory of entirely shutting in gas wells and high gas-oil ratio wells to increase the ultimate oil recovery from a pool is sound, but the fugacious nature of oil and gas together with the penalties imposed by deferred gas production makes the theory exceedingly difficult to apply in nonunitized pools because of the equities involved. However, it does seem that the oil industry could make some progress in eliminating excessive and wasteful gas production from oil pools, especially with the police power of the various states committed to a conservation program.

Gas and Oil Proration

It is suggested that some progress could be made by inaugurating gas proration simultaneously with oil proration, that is, prorating free gas as well as oil, and the proper factors could be introduced to each pool to give oil production primary and gas secondary consideration. The objective would be to encourage pressure maintenance by controlling the volume of fluid withdrawal from the gas and high gas-oil ratio wells in such a manner that the resultant reservoir pressure in their immediate respective areas would equal or be slightly greater than the reservoir pressure existing in the more prolific oil areas.

Classification of wells for simultaneous gas and oil proration purposes would be based on gas-oil ratio. The average operating gas-oil ratio in the pool could be determined and it could be stipulated that any well producing with a gas-oil ratio in excess of, say, two times the average ratio of the pool, would be classified as a gas well, and any other well with a ratio below that amount would be classified as an oil well.

The proration of wells classified as oil wells could continue on any equitable basis and the proration of wells classified as gas wells could be based upon each well's gas potential, acreage, or other equitable factors affecting gas drainage, but the total allowable gas production from all the gas wells would be based on the effect of their gas withdrawal upon the reservoir pressure in the areas immediately surrounding such wells. Bottom hole pressure data would be of immense value in determining whether migration of fluid was to or from the gas wells.

Such a segregation of wells would enable the police power of the state to have a weapon in the form of gas proration which could be used to bolster oil proration to prevent underground waste of oil, and they could use their discretion, according to the local conditions in each pool, as to how drastically they would curtail, by means of gas proration, the gas production from the classified gas wells in order to encourage pressure maintenance for the benefit of efficient and economical oil recovery from the oil wells.

New Requirements for Tool Joints Used in Rotary Drilling Being Considered

By REX G. HAMAKER
Vice President, Reed Roller Bit Co.

With progress in the development of all classes of rotary drilling equipment including larger and higher pressure mud pumps has come the realization of the value of larger volumes of circulating mud delivered through the drilling bit as an aid to drilling speed and drilling bit efficiency.

Many field tests have been completed to prove that with increased mud pump pressures and drilling mud volumes there is a material increase in drilling speeds as well as in drilling bit efficiencies. Mud pump pressures have been increased from 200 pounds per square inch to oftentimes over 1,000 pounds per square inch with corresponding increases in mud volumes. Mud pump pressures of from 600 to 800 pounds per square inch are now quite common.

This increase in the volume of drilling mud pumped has brought forcibly to the attention of the operators the necessity of eliminating the restrictions to the pumped flow of the mud stream to minimize the back pressure against the pump and to permit as large a volume of mud to reach the bit at as high a pressure as possible.

To accomplish this, fittings between the pump and the swivel have been either eliminated or substituted with long bends; larger or a multiple of rotary hoses have been used; larger capacity swivels have been introduced; kellys having larger bores are being manufactured and finally in the drill stem itself where a multiple of severe restrictions occur in the tool joints a new type of tool joint called the "full hole tool joint" is being adopted.

The full hole tool joint is conventional in design having the same outside diameter as the A.P.I. tool joint but having an inside bore or passageway equal to the passageway through the upset in the average weight drill pipe. This passageway has about twice the area of the A.P.I. tool joint. The pipe thread ends of the full hole tool joint are A.P.I. and fit A.P.I. internal upset drill pipe as do A.P.I. joints.

The full hole tool joint thread is of A.P.I. form but on a larger diameter pin and in a larger inside diameter box. The lengths of these full hole tool joints are the same as the lengths of the A.P.I. tool joints.

The torsional strengths of the full hole tool joints were computed to be equal to the torsional strengths of the A.P.I. tool joints by so designing them to have a section modulus at the base of the pin equal to that of the A.P.I. tool joint. That the strength of these full hole tool joints is adequate has been proven through their use in the field. These joints have been introduced and used quite extensively in the East Texas and Gulf Coast fields and in Oklahoma.

To make apparent that the regular tool joints are costly restrictions to the flow of the mud stream it has been aptly pointed out that it would be just as unreasonable to put a pipe line together with reducing couplings as it is to use tool joints with restricted passageways.

Records show that it is not uncommon to reduce the drilling time for wells drilled below 5,000 feet by 20 per cent with the substitution of full hole tool joints in the drill stem.

In the Oklahoma City Field a major contractor recently made a comparative test by drilling to 6,500 feet with 6-inch full hole tool joints as against 6-inch A.P.I. tool joints. Three wells were completed with the full hole tool joints in an average of 10 days less time than was taken to drill several wells previously with A.P.I. joints. Except for the tool joints, all drilling equipment used was the same. At 4,000 to 4,500 feet the steam pressure was held at 300 pounds. The pump pressure was approximately 1,000 pounds from a 7¾x18 Wilson-Snyder pump operating at 55 revolutions per minute against A.P.I. tool joints.

With full hole tool joints and under practically identical conditions the pump pressure at the same depth in the next well was from only 500 to 700 pounds with the pump operating at 60 to 65 revolutions per minute. The lowered pump pressure even with increased volume being pumped was attributed to the full hole tool joints.

It has been found that much cutting out that has occurred on the inside of tool joints having restricted passageways and caused from turbulence or swivel of the grit laden mud is eliminated.

Users of full hole tool joints claim that due to the larger diameter tool joint pins and boxes they spin up and break out easier than do other tool joints and that while there are several advantages to the full hole tool joint there are no disadvantages.

The full hole tool joint was developed by the Reed Roller Bit Co. about seven years ago for the running of a collapsible bit made by that company. However, the rapid increase in the use of the joint for general purpose drilling has been recent according to that company which now supplies many Gulf Coast and Mid-Continent operators. Other advantages claimed for the full hole tool joint are: To facilitate running well surveying instruments, inside cutting tools, collapsible bits, core drills, shots, etc.

INTEREST IN SUBJECT

The accompanying article by Mr. Hamaker is especially interesting at this time in view of the fact consideration was given at the annual convention of the American Petroleum Institute in Houston last week to the formulation of a standard on full hole tool joints for rotary drilling. Members of the standardization committee of the institute handling this matter visited the plant of Reed Roller Bit Co. in Houston.

SIOUX CITY, IOWA, RATE

SIOUX CITY, Iowa, Nov. 21.—Reductions from 20 to 25 per cent in gas rates in Sioux City have been ordered by the city council. In a resolution adopted after nearly three hours of investigation, the council granted the Sioux City Gas & Electric Co. until 10 a. m. December 16 to show cause why the proposed reduction should not be put into effect.

Use of Inhibitors in Treating Motor Fuels Offers Satisfactory Solution to Gum Problems

By R. C. CONINE
Chicago Bureau, The Oil and Gas Journal

Additions to the literature concerning gum formation in gasoline and its inhibition by means of minute quantities of organic reagents will in the next few months reveal that this complex problem is much nearer solution than is generally supposed. The appearance of undesirable resinous matter in oily products had been lamented for years before investigators set out to eliminate or arrest gum formation in gasoline and benzol, so that if petroleum chemists did not find ready-made preparations for the prevention of auto-oxidation in gasoline, they did find a splendid groundwork on the theoretical side of their problem.

Involving as it does experiments which require from a few months to more than a year for completion, it is not surprising that the work of finding suitable anti-oxidants to overcome the gumming tendency of cracked gasolines has proceeded at a slow pace. This review outlines several phases of the gum problem, and the exceedingly complex nature of this work will be apparent. It will be seen that technologists have demonstrated striking ingenuity in providing the answers to the following questions: What is harmful gum in gasoline? How is it formed, and how can the gum-forming reaction be inhibited at low cost and without the introduction of new problems? How is the tendency of a gasoline to form gummy substance during storage to be determined and accurately measured, when it may leave the refinery practically gum free according to evaporation tests? The correct answers mean great savings in time, money and quality. Under some conditions an effective gum inhibitor may entirely eliminate costly treaments which consume considerable time and energy and which cause losses qualitatively as well as quantitatively in the gasoline without giving certain assurance that the product will not deteriorate after a few months' storage.

What Is "Harmful" Gum

The resinous or viscid matter whose appearance in cracked gasolines portends clogged motor fuel lines, fuel pumps, carburetor valves, and which later is found on the surfaces of the manifold, valves and cylinders of the automobile engine in the form of a hard black deposition which will eventually affect its operation, is "harmful gum." It has been defined simply as the nonvolatile organic material in cracked gasoline, and this, to say the least, is an inadequate explanation.

Some confusion arises in the use of the terms by which gum and gum-forming materials are variously known. These terms include preformed gum, pseudo-gum, actual gum, residual gum, potential gum. "Potential gum" is not the name of a certain form of gum; it is the designation of the gum as determined by a specific method of test. The potential gum of a saturated straightrun gasoline, for instance, which is ordinarily considered nil, will be found to be exceedingly high if a gum test involving the addition of technical crotonaldehyde and exposure to light in oxygen is used, experiments by C. R. Wagner and Julius Hyman show. The gum produced in the straightrun gasoline, according to Wagner, possesses odor, color and solubility characteristics similar to those of the residual gum produced in old cracked gasolines. The terms "actual gum," "preformed gum" and "residual gum" are generally considered identical in meaning.

In proposing the term "pseudo-gum," Wagner and Hyman stress certain distinctive features which they believe are glossed over in terminology which suggests that harmful gum is a gasoline-insoluble resin. Their pseudo-gum consists largely of peroxides, per-acids, aldehydes and ketones, and is distinctly different from their "residual gum." The pseudo-gum is the gum-forming materials in so-called gummy gasoline, and Wagner states the position thus: "We seem, then, to be faced by a condition which has been overlooked quite generally, that is to say, that so-called gummy gasoline contains actually little or no gum in the sense of the word as applied to resins left by evaporation. The harmful constituents in old unsaturated gasoline seem, rather, to be the gum-forming materials, or what we shall call 'pseudo-gums'." Wagner and Hyman's residual gum denotes the hard resin remaining after gasoline has been completely driven off by heat, and their analyses of these resins from liquid and vapor phase cracked gasolines showed them practically alike with the empirical formula, $(C_5H_4O)_x$. They report: "We further found an acid number of about 65 and a saponification value varying from about 250 to above 300, indicating either an ester or lactone structure for residual gums from cracked gasolines."

Vanderveer Voorhees and J. O. Eisinger quote the opinion of B. T. Brooks that gum in gasoline is merely the end product of the polymerization of peroxides. Wagner and Hyman are of the opinion that the residual gum is a condensation product formed by condensing the aldehydes, ketones, per-acids and other compounds that may be present in the gasoline solution, this condensation being effected by high temperatures or by evaporation. They have been unable to find that residual gums themselves contain peroxides in any form, although they may result from peroxide condensation. Gum formation in gasoline is generally conceded to be a process of auto-oxidation.

The peroxide theory appears to be explained by the phenomenon of auto-catalytic oxidation in gasoline. The chain reaction theory is an elaboration of the peroxide theory and a number of highly considered technologists do not see any advantage in the chain explanation. The original chain reaction theory involved a simple progression, and the later exponents have enlarged it by postulating the initiation of new chains at intervals in order to account for the progressive acceleration which is typical of the auto-oxidation reaction, that is, the geometrical progression. In its simplest statement the peroxide theory involves no more than the fact that peroxide molecules can produce other peroxides in the presence of atmospheric oxygen. The reactions may be summed up as follows:

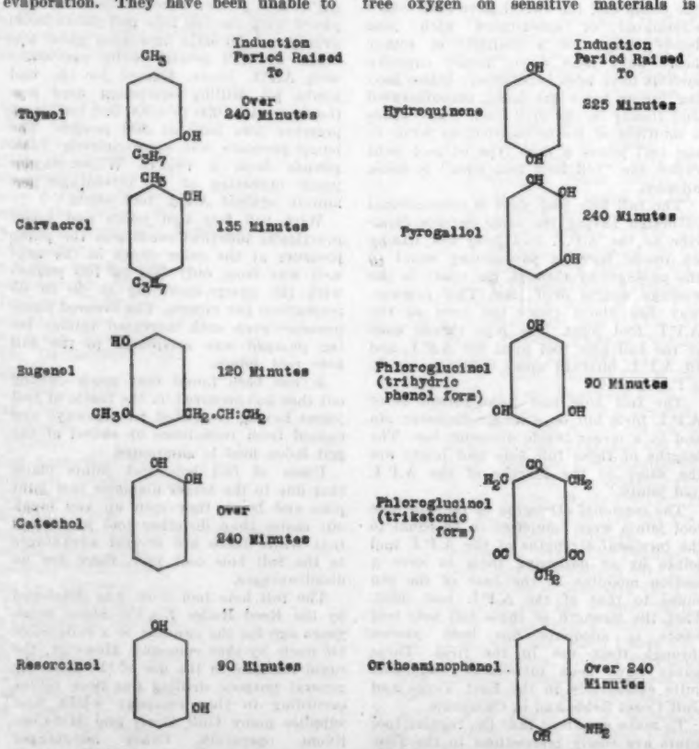
Gasoline + O_2 (slow)→ Peroxide

Peroxide + O_2 (rapid)→ 2 Peroxides

Inhibitor + Peroxide (very rapid)→ Inert Materials

The industry is indebted to Gustav Egloff, J. C. Morrell, C. D. Lowry, Jr., and C. G. Dryer for the masterly summary of the main generalizations found in the literature regarding the action of inhibitors of auto-oxidation. The following is taken from their presentation at the petroleum division sessions of the American Chemical Society at Denver: (1) The power of preventing action of free oxygen on sensitive materials is largely possessed by substances which themselves readily are oxidized; (2) during the period in which an inhibitor of the oxidizable class protects a substance from oxidation, the inhibitor itself is usually slowly oxidized and its oxidation is an induced reaction; (3) a given substance, depending upon conditions, may act as an inhibitor or accelerator of oxidation of a second substance; (4) the results of our own work (Egloff and others) and of others appear most satisfactorily interpreted on the assumption of chain reactions. Christiansen is quoted: "In a bimolecular reaction, unless the reaction is immeasurably fast at any given time, only a fraction of the pairs of molecules which collide are able to react. These are 'active' molecules, whose energy exceeds a certain value. The molecules of the reaction products just after the reaction possess an available energy greatly in excess of the mean energy at the temperature considered. Now these very 'hot' molecules have sufficient energy to activate molecules of the reactants at the first encounter, and when these react, the resultants in their turn are able again to act as activators and so on. Consequently, it is possible that the occurrence of one elementary reaction will give rise to a whole series of such reactions." The role of the inhibitor, in this light, appears to be that of breaking the reaction chain by interposing a "shock absorber" molecule.

In their paper read at the tenth annual meeting of the American Petroleum Institute in Chicago, Egloff, Faragher and Morrell cited the findings announced by Hall in 1915 on the identification of gum formation in highly cracked gasolines as an air oxidation process, and the work of Moureu and Dufraisse who "have made an extensive study of the effect of anti-oxidents in styrol, furfural, acrolein and linseed oil, which ordinarily under oxidizing conditions develop color and form gum-like substances. These authors have found that a mere trace of pyrogallol will prevent the oxidation of acrylic aldehyde, for example, even in an atmosphere of oxygen."



The relationship between structure and inhibiting effectiveness. The induction periods in the oxygen metal bomb of all the gasolines before the addition of the inhibitor were 35 minutes. The quantity of inhibitor added in each case was 0.05 per cent

Factors in Inhibition

Egloff, Morrell and their co-workers have contributed most extensively to the literature pertaining to the relationship between structure of antioxidants and their effectivness as gum inhibitors. Their experimental data represents one of the most comprehensive undertakings in the oil industry. The materials they have tested for effectiveness as gum inhibitors include the following: the phenols, amino and nitro-phenols, the alcohols, amines, hydrocarbons, halogen compounds, ethers, ketones, quinones, acids, esters, amides, nitro compounds and nitrogeneous substances of other types, sulphur compounds, and other materials such as tetraethyl lead, phenoxasine, acetoxime, benzoyl peroxide, iron carbonyl, and du Pont 8, 9 and 10, antioxidants. They have found that in general the introduction of a nitro group into the phenols depreciated the inhibiting value, while the insertion of an amino group in any position increased this value. Good results were obtained from condensation products from acetone and aniline and from acetone and diphenylamine. Little results were obtained from halogen compounds. Most of the ketones and quinones tested were of little value as gum inhibitors. Among the acids and acid derivatives tested only gallic acid proved useful, the esters giving poor results, and only para-aminoacetanilide, among the amides, proving com-

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paratively effective as a gum inhibitor. Thiodiphenylamine, among the sulphur compounds tested, gave an exceptionally long induction period in the metal oxygen bomb, while thiocresols were relatively ineffective.

"As a rule," Voorhees says, "it appears that those compounds which may revert to a quinonoid structure (that is, a structure containing one or more double links of the kind that occur in quinone between carbon and oxygen) on oxidation are the most effective antioxidants. This may mean merely ease of oxidation, or it may mean a specific reaction between the quinone and the auto-oxidising catalysts in the gasoline." While Egloff and others have clearly demonstrated a relationship between the structure of an inhibitor and its effectiveness as an antioxidant preventing gum formation in gasoline, it must be remembered that gasoline cannot be considered a constant factor, nor can the acceptability of the antioxidant rest entirely on the point of the arrangement of its groupings in the molecule.

Steric Hindrance

In his discussion of the process of oxidation of side-chains in the case of the three xylenes and other groups of isomeric hydrocarbons, Julius B. Cohen says, in "Theoretical Organic Chemistry," that this process does not take place with equal facility: "Considerable differences have been observed, not only in the case of the different isomers, but in the effect upon them of different oxidising agents. Dilute nitric acid is the least active oxidising agent of those usually employed. The three xylenes are converted by nitric acid into toluic acids, while chromic acid solution oxidises meta and para xylene to the corresponding phthalic acids. On the other hand, the ortho-compound is completely decomposed by chromic acid, while potassium permanganate oxidizes it to phthalic acid. The results are intimately related, with the protective influence which groups in close proximity exert upon one another. The presence of groups in the *ortho*-position to the methyl group renders oxidation more difficult. We are frequently confronted with similar cases of protective influence, or, as it is sometimes termed, space interference or steric hindrance exercised by adjoining groups in arresting, or impeding chemical change." In the same place Cohen presents as a striking example of this protective influence that afforded by the di-*ortho*-substituted benzoic acids. He says: "They (di-ortho benzoic acids) cannot be converted into esters by the method usually employed for obtaining alkyl benzoates (passage of hydrochloric acid gas into alcohol and boiling with benzoic acid), whereas a theoretical yield of the methyl, nitro- and halogen groups in the isomeric esters is obtained. And this does not depend on the character of the substituting groups, which may be entirely unlike one another. The presence of two ortho positions arrest esterification with equal effect."

Certain apparent conflicts in the conclusions found experimentally with the definite relationship which has been established between the structure of the inhibitor and its effectiveness as an antioxidant can probably be resolved as satisfactorily as Voorhees suggests in the case of hydrazobenzene ($C_6H_5NH.NHC_6H_5$): "It is possible that the ineffectiveness of hydrazobenzene is due to the fact that it is so readily oxidized that in a brief time none remains to act as an antioxidant." In the case of the falling off of inhibiting activity when both hydrogens of the amino group are replaced as in benzal para-amino phenol, he says that the phenomenon closely resembles the result observed with the diamines in which complete coverage of an amino group gave lower antioxidant activity.

The superiority of the ortho and para positions in increasing the inhibiting value of isomeric compounds has been well established by the investigations of Egloff, Morrell, Lowry and Dryer, as revealed at the Buffalo, N. Y., meeting of the American Chemical Society last year. Their data show that phenolic (hydroxyl) compounds were enhanced as antioxidants by introduction of alkyl radicals in the ortho and para positions. Addition of two alkyl groups proved even more effective, and comparisons between such compounds as 2-hydroxy-1, 3-di methyl benzene (ortho), and 2-hydroxy-1, 4-dimethyl benzene (with methyl groups ortho and meta to the hydroxyl) showed the weakening effect in an antioxidant of the meta position. However, the second alkyl addition improves the induction period even when placed in the meta position of the monohydroxy. The three hydroxyl groups (in 1, 2, 3) in pyrogallol give considerable effectiveness in gum inhibiting, and these investigators say in explanation of the poor quality in this respect of phloroglucinol that it is not unlikely that the latter isomer exists in gasoline in the ketonic modification, acide from the fact that in its molecule the two meta positions are occupied by hydroxyl groups.

Suitable Inhibitors

The suitable gum inhibitor will stabilize the gasoline in respect to gum formation without affecting the color of the gasoline adversely, and this inhibitor must be more soluble in gasoline than it is in water. Naturally, the cost must not be prohibitive. The partition ratio of the inhibitor is of great importance because if the inhibitor is more soluble in water than it is in gasoline, the gasoline will be robbed of its antioxidant during storage as it is practically impossible to exclude water. Voorhees and T. H. Rogers point out that pyrogallol, a powerful inhibitor, can be removed from gasoline completely by shaking the gasoline with water. The polar nature of most antioxidants makes their solubility in gasoline quite a problem, and chlorination, which does not add to the inhibiting power, has been resorted to in order to increase the solubility in gasoline. As very minute quantities of the antioxidants are required to stabilize gasolines, the real problem is to assure greater solubility (however slight) in gasoline than in water. Taking cost, color stability, inhibiting value and solubility in gasoline into consideration, Voorhees favors para-benzylaminophenol as an antioxidant.

Tests With Inhibitors

Egloff and his co-workers have developed an antioxidant which was recently placed on the market under the name of Universal inhibitor. This is a liquid compound which they report has been tested on a commercial scale and has proven its worth in stabilising millions of gallons of cracked gasolines of various types. According to the developers of this inhibitor, the liquid antioxidant is completely soluble in gasoline and will not crystallize out under any condition, and 1 gallon or less of it is sufficient to assure gum stability in 100 barrels of cracked gasoline. Its form greatly simplifies the problem of introducing it into the finished cracked gasoline at the refinery. The inhibitor is in use at a number of refineries where it is fed into the finished gasoline while in the line and on the way to storage. A simple control valve regulates the stream of inhibitor to gasoline.

The following results were obtained with the liquid inhibitor in Mid-Continent and Pennsylvania cracked gasolines. The inhibitor was used in the amount of 0.01 per cent by weight of the gasoline.

PENNSYLVANIA CRACKED GASOLINE

Inhibitor, per cent	0	0.01
Gum (cu. dish), mg.	8	6
Color	30	30
Induction period, min.	60	255

Storage Test

Month—	1	2	3	4	5
Gum by copper dish (mg. of gum)					
Uninhibited	63	72	97	237	347
Inhibited	5	3	3	8	6
Color					
Uninhibited	30	30	27	20	24
Inhibited	30	30	30	30	30

MID-CONTINENT CRACKED GASOLINE

Inhibitor, per cent	0	0.01
Gum (cu. dish), mg.	112	15
Color	28	27
Induction period, min.	435	630

Storage Test

Month—	1	2	3	4	5
Gum by copper dish (mg. of gum)					
Uninhibited	44	52	146	104	156
Inhibited	11	37	24	23	20
Color					
Uninhibited	26	28	27	26	25
Inhibited	25	29	26	26	26

These investigators found that some California cracked gasolines require no inhibitor because they contain natural inhibitors in the form of nitrogen compounds. However, even in these cases the induction periods were lengthened from 9 hours to 11 hours in the metal oxygen bomb test, but after five months the inhibited and uninhibited gasolines had the same properties as at the beginning. Using 0.01 per cent of the liquid inhibitor in a blend of Mid-Continent and West Texas cracked gasolines increased the induction period by 8.5 hours to 10 hours. Gum was found in the uninhibited blend in the amount of 68 mg., while that in the inhibited gasoline was 41 mg. After four months of storage the uninhibited gasoline showed 180 mg., while the inhibited blend showed 51 mg.

A vapor phase cracked gasoline with gums of the order of 500 mg. and over was successfully inhibited and brought down to 20 mg. to 25 mg. gum content. The induction period in the oxygen metal bomb was increased more than four hours. Some vapor phase treated gasolines were increased by 3 to 10 hours and more, depending upon the concentration of the inhibitor, up to 24 hours, with the gum content before inhibiting being 350 mg., and after, down to 30 mg. The copper dish testing method was used in obtaining these results.

Oxidation-Reduction

The approach made available to the gum problem by Fieser has been widely referred to in recent writings. From his study of 70 phenolic and amino compounds, Fieser composed his table of "The Effect of the Critical Oxidation Potential of Ortho or Para Substituents," and this has been used by Egloff, Lowry, Morrell and Dryer in calculating the potentials of certain compounds. They report: "The potential of 4-chloro-2-amino-phenol was estimated by adding to the critical potential of ortho-amino-phenol, 0.673 volts, the value given by Fieser for the effect of introducing chlorine which is 0.005 volts. A substituent in the meta position exerts but 16 to 18 per cent of the influence of one placed ortho or para." A table correlating critical oxidation potentials with inhibiting values has been prepared.

Gum Content and Stability

Various methods used in determining the immediate gum of a cracked gasoline and in predicting the gum condition of the gasoline after a period of storage may be reviewed. It is obvious that the gum found in a gasoline depends largely upon the method of test, and will vary with the different tests as the conditions in the methods differ. These test variables are temperature, rate of evaporation, additional factors such as presence of steam, which some point out is not inert. In regard to the copper dish test, Wagner and Hyman refer to it as an example of metal catalysts in auto-oxidation in gasoline. Other tests for "pre-formed" gum range from slow evaporation in the glass dish to instant evaporation by dropping the gasoline through a heated spiral. The air jet method (Method A as described in the appendix to the 1932 report of Committee D-2 of the A.S.T.M.) is favored by Rogers, J. L. Bussies and P. T. Ward, who point out that the work of Voorhees and Eisinger showed a correspondence between figures obtained by the air jet and the steam oven methods. These workers see a fairly constant relationship among the various evaporation methods. However, the important problem is the development of an effective method for predicting gum stability in gasoline. It is often seen that while the gum in a freshly finished cracked gasoline which has been properly refined may be negligible, a test made on this gasoline after a few months will show gum in the order of many hundreds of milligrams per 100 cc.

Gumming Tendency

Accelerated aging tests are relied upon to give an indication of the gum stability of a gasoline during storage life. Most investigators use a metal oxygen bomb test in which gauges are used to indicate drops in pressure. Voorhees and Rogers report that they obtain more satisfactory results by replacing the metal bomb with a glass flask and by substituting manometers for the gauges. The glass flask containing the gasoline under test and into which oxygen is introduced at 2.5 atmospheres pressure is held in a shaker in the 100° C. water bath. The claim is made that time spent in waiting before pressure readings can be started is cut considerably in the glass flask setup, narrowing the margin of possible experimental error.

The object of the accelerated oxidation test is to determine the "induction period" of the cracked gasoline. The induction period is defined by Voorhees as "the time from the start of test till the rate of oxygen absorption becomes 1 cc. per minute." Egloff says: "As an indication of storage stability, resistance of gasoline to accelerated oxidation appears to be the best available test. The time before measurable absorption of oxygen begins in the oxygen bomb test is assumed to be an approximate measure of the length of time gasoline will be stable in storage."

Some of the difficulties faced in establishing a relationship between the accelerated oxidation test and actual storage life are already evident. Voorhees, however, states that experiments have shown that an induction period of 390 minutes corresponds to about six months' storage life in glass bottles with the temperature at 35° C., or to a year's storage (or longer) at atmospheric temperatures when the gasoline is saturated with normal oxygen. Voorhees and Rogers' experiments point to the generalization that a faster rate of gum formation in storage life than their induction periods would indicate is shown by raw gasolines, while acid treated gasolines oxidize more slowly in storage than the test would predict. The untreated sweetened gasolines approach very closely in storage the gum behavior predicted by the accelerated oxidation test. In regard to the gasolines to which inhibitors have been added it has been found that hydroquinone as a gum inhibitor protects gasoline much better than the induction period would indicate, while gasolines containing the antioxidant, alpha naphthol, do not live up to the predicted oxidation rate. Gasolines to which para-benzylaminophenol has been added show a close correspondence between induction period and stability in storage life.

Oil States Advisory Committee Suggests Deep Production Cuts

HOUSTON, Tex., Nov. 19.—The Ten States Advisory Committee representing the governors and public service commissions of oil producing states met here in the course of the American Petroleum Institute's annual meeting and the allowables committee's report recommending the quantity of oil that should be produced in the several states was adopted. The recommendations follow:

State—	Bbls.
Oklahoma	390,000
Kansas	94,000
Texas	825,000
California	440,000
Louisiana	64,000
Arkansas	34,000
Mountain states	75,000
Eastern states	101,000
Michigan	22,000
Total United States	2,045,000

After January 1 and until April 1, the committee advised daily production of 2,000,000 bbls. per day, to be allotted among the states as follows:

State—	Bbls.
Oklahoma	375,000
Kansas	92,000
Texas	800,000
California	440,000
Louisiana	63,000
Arkansas	33,000
Mountain states	75,000
Eastern states	101,000
Michigan	21,000

The allowables committee was composed of Thurman Hill, Kansas; Cullen F. Thomas, Texas, and Cicero Murray, Oklahoma.

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405 LEXINGTON AVE., NEW YORK

The Oil and Gas Journal

PRODUCING REFINING PIPELINE ENGINEERING MARKETING

Published Weekly by

THE PETROLEUM PUBLISHING COMPANY

114-116 West Second Street, Tulsa, Oklahoma

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JOHN M. EGAN, General Manager
JAMES McINTYRE, Editor
ANDREW M. ROWLEY, Managing Editor
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Established 1916, by PATRICK C. BOYLE

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The Next Job

The next job in the oil business will be to get the marketing end on a level with the producers and refiners.

It has taken years to get the average producer to see that every barrel produced above what could be sold broke the market—that instead of thinking about volume of production he should think about what he received for it.

At last, thanks to growing co-operation in curtailing overproduction, we are nearing balancing supply with demand. The last hundred thousand barrels may be the hardest but with a final spurt producers ought to approach the mark set for the next few months in the reports of the economic committees submitted at Houston.

The refiners have lagged, having been openly skeptical at the outset of any possibility of co-operation on curtailment by the producers, but even they have been making progress in the past year. The latest government reports on operations in the Mid-Continent area, which includes all the Southwest but the Gulf Coast, shows that gasoline stocks compared to a year ago have been reduced 12 per cent; kerosene stocks, 40 per cent; gas oil and distillate, 50 per cent; residual oils, 30 per cent, and petroleum wax, 50 per cent.

Accomplishments in other refining areas have not all been so great but it can be said that for the entire country the statistical situation for the refiners is substantially better than it was at this time a year ago.

The refiners in the past few months have realized the necessity for curtailment in their operations largely through the decrease in consumer demand and with a few exceptions have co-operated in the movement to bring supply into line with requirements.

Unfortunately, the few who have refused to perform their part have thereby contributed to the conditions that have been apparent in the refinery and retail markets. The result has been that it has become very difficult to reflect in the refinery or retail markets any improvement in the crude oil situation brought about by curtailment.

The fact is the marketing end has yet to learn the same lesson so painfully learned by the producing and refining divisions of the industry, that the goal of successful business is not volume but profit.

Leadership in volume of output, from field, plant or stations, unless made at a profit, may mean leadership in losses. The test of success in any business is not size of turnover but what return it obtains.

Crude oil producers now know that it is suicidal to produce more oil than can be sold at a living price. They know they are better off with less oil and are determined to keep production level with demand.

An increasing number of refiners, having had the same experience with overproduction, are working to hold supply in line with requirements. Both these producers and these refiners have seen the folly and the danger of the pursuit of volume luring them into the quicksand of distress sales.

But the marketing end has yet to learn that mere volume of sales is not the essential thing to aim at—the essential thing is whether those sales are made at a profit or at a loss. A much smaller volume at a profit would have kept many a company in the black where greed for gallonage at any cost put it heavily in the red.

It is exactly the same experience that the producers and the refiners have been going through until convinced that less oil sold at a profit was better all around than more oil sold at a loss.

It may sound sort of silly but it is no sillier than the marketing methods that mistake volume of sales for success regardless of whether they are made at a profit or at a loss.

How else account for the duplication of outlets and the multiplication of expenses when the only result could be less business and consequently higher cost per unit?

What became of profits when they were whittled away in price concessions to get volume in gallonage?

Nor was that all. Every bid for more gallonage below the market furnished an excuse for further cuts and concessions until the whole business was demoralized.

Had the marketing end kept its eye on profit instead of volume it would have kept on safe ground but it has that to learn.

So the next job of the industry is to get the marketing end on the same level as the producers and refiners, to realize that there are sound business principles that cannot be disregarded without disaster, that cutting prices to get volume, like overproduction, simply undermines the market which could have been maintained at a profit if moderation had displaced greed.

The industry should now give as much attention to the marketing as to the producing and refining ends of the business because that situation must be corrected before there is any chance of benefiting from the improvements in the refining and production divisions.

It will not do much good to bring crude production in line with demand and adjust manufacturing to requirements and then go out into the consumer market and compete with each other in such a manner that it will be impossible to obtain a profitable return on operations.

Assume that the crude oil situation is in hand, yet a substantial fraction of the oil business has to look to the retail conditions for their over-all profit and they cannot buy crude at a certain price unless they are able to get a compensating return in their manufacturing and marketing operations.

Although the manufacturing situation has improved, the marketing situation was never more deplorable than it is now. It is vain to say there is no remedy. Careful investigation will show conditions that could be materially improved by determined effort.

Many will find that while they have been blaming others in some directions they may have been equally remiss or guilty in others. What is needed is a general view, not a mere local glance. Solution of the crude overproduction problem would never have got anywhere if it had not been considered in its national scope.

The immediate necessity in the marketing end is to get it on a cost rather than a volume basis. That would eliminate overexpansion in outlets, duplication and multiplication of expense, and competition in losses for gallonage. While these abuses continue improvement in the production and refining divisions will be continually handicapped in the effort to stabilize the industry.

There is no sense in making every effort to stabilize output and then give away everything that is gained in a mad scramble for unprofitable business.

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No Improvement in Oklahoma Gasoline Market With Strong Demand for All Grades of Fuel

By C. O. WILLSON

Refinery gasolines continue weak in Oklahoma (Group 3) and spot prices in tank car sales are slightly lower although a number of refiners in Oklahoma and other Mid-Continent areas have not changed their quotations since the first of the month. Natural gasolines appeared firmer the latter part of last week and the first of this week with some improvement in spot trading. The few buyers found relatively small quantities offered and the market is believed to be in a position to advance with any improvement in the refinery market.

Several sellers reported a number of inquiries for all grades of fuel oils, distillates and gas oils the first of this week. The contract movement of fuels, particularly those suitable for furnace oils was heavy following the cold weather period that extended throughout the Middle West last week. In fact, a few refiners are having more business in fuels than they want at this time. Many are in a position where they would gladly trade 2 gallons of furnace oil business for 1 of gasoline. There are at least a few long-time contracts between refiners and jobbers of furnace oils in which the contract price is now less than the open market price. Refiners with limited supplies of the furnace oils are now faced with the condition of supplying part of their contract requirements through open market purchases from other refiners thus losing on a part of their sales. Other refiners will be placed in the same position, unless conditions change before their storage supplies are depleted. Most contracts are based on published quotations but in some cases maximum prices have been provided and in others the posted crude oil schedules are taken into consideration. It is with these contracts that some of the refiners are finding themselves in a position of selling on contracts under the spot tank car quotations.

Refined Market Barometer

Gasoline tank car markets for the most part were marking time in the several refining groups over the past week. Some areas reported difficulty in adjusting gasoline supply to a decrease in demand which this year is more than seasonal. No important breaks in the gasoline market were reported, with a more optimistic viewpoint taken in the East. The export gasoline market was inactive with movements confined to contract agreements. The kerosene market was generally firm and the same situation applied to all grades of furnace oils, which were particularly strong at Middle West points. Heavy fuels were unchanged. Price reductions in the East were the most important change in the lubricating oil market. Natural gasolines unchanged. Some grades of petroleum wax lower in price as quoted by Atlantic Seaboard refiners.

Mid-Continent—Gasoline market weak and slightly lower quotations from a few refiners. Natural gasolines firm in Oklahoma and weak in Texas. Furnace oils and kerosenes strong. Fair demand for residual fuel oils of all grades. No changes in lubricants and wax.

East Coast—Advance in tank wagon quotations brings better tone to gasoline tank car market although demand slow. Kerosene strong. Gas oil weak. Bunker fuels unchanged. Cylinder stock prices lower. Wax demand lags and considerable price irregularity has developed.

Pennsylvania—Prices lower on several grades of neutral oils, steam refined stocks and bright stocks. Gasoline and kerosene unchanged.

Chicago—Strong demand for all grades of furnace oil with limited supplies. Gasoline prices lower. Special naphthas unchanged.

Gulf Coast—Kerosene and gas oils strongest products. Slow demand for lubricating oils.

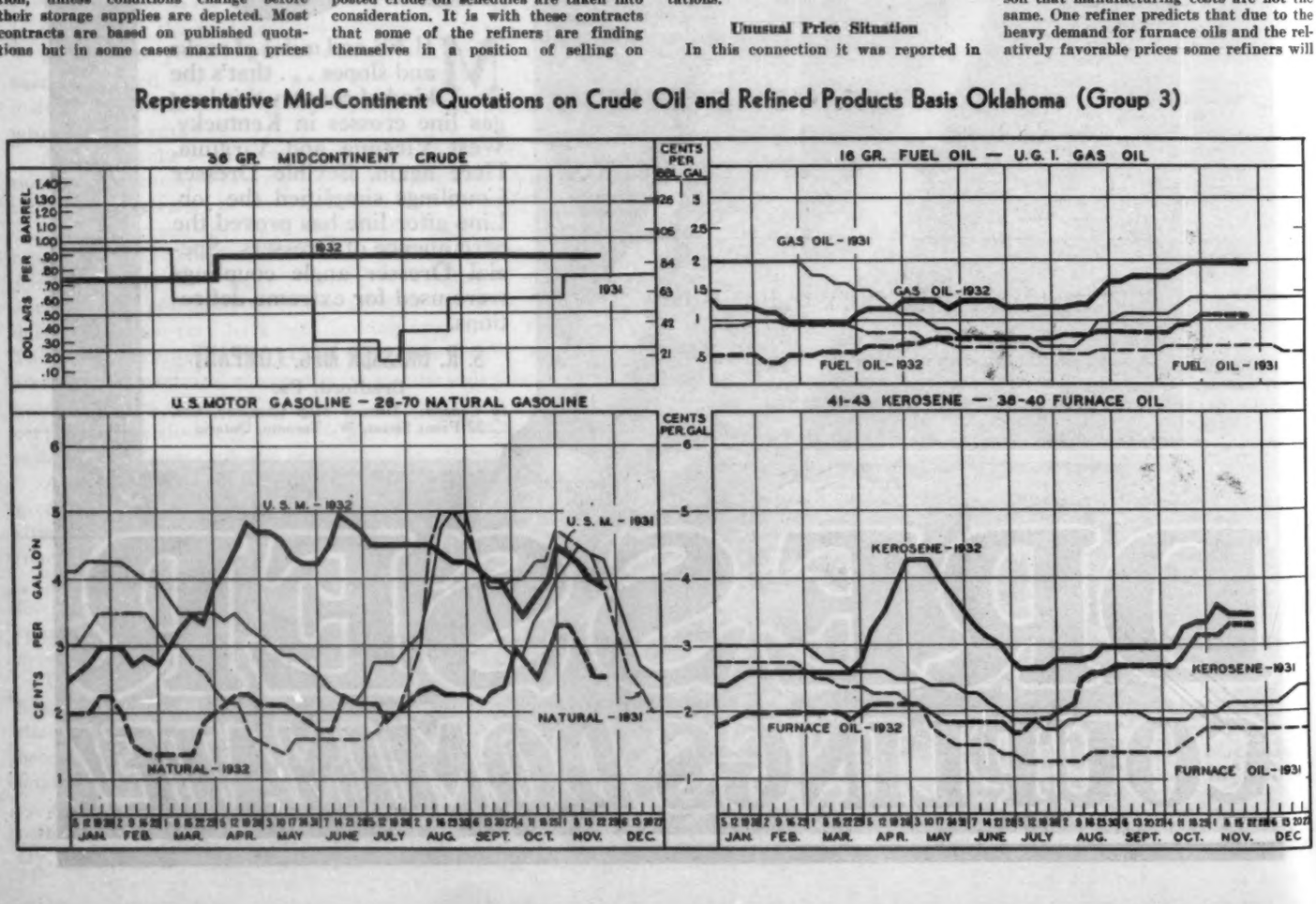
California—Fair demand for gasoline and prices holding for domestic movement. Good demand for kerosene. Fuels firm.

Unusual Price Situation

In this connection it was reported in the trade during the past week that one East Texas refiner had sold furnace oil, kerosene and U. S. Motor gasoline at the same tank car price. The furnace oil was a 39-40 prime white grade, the kerosene was 41-43 water white, and the gasoline a low octane U. S. Motor grade. The price in all three cases was 3½ cents. A further unusual price situation is that refiners paying the top posted price for crude oil plus a pipe line charge have a crude oil cost at their refineries of around 3 cents a gallon. This sad commentary on refined market conditions reflects actual buying conditions in all the Mid-Continent and Middle West refining areas. Reduced crude oil runs to stills and expanded cracking facilities has lowered the current output of all grades of distillates and gas oils available for furnace oil and with inventories far less than they were a year ago, the demand is said to equal that of last year. While coal is a cheaper fuel than furnace oil at most points, in a great majority of cases, owners of homes, hotels, hospitals, office buildings, etc., having oil burner installations, are continuing to operate them and are not returning to coal. There have also been a number of new oil burner installations although government reports show a decrease when compared to 1931 figures.

This near equality in prices for gasoline, kerosene and furnace oils obviously cannot continue indefinitely for the reason that manufacturing costs are not the same. One refiner predicts that due to the heavy demand for furnace oils and the relatively favorable prices some refiners will

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



find it expedient to curtail their cracking operations during the winter months and thus increase the supply of a product for which there is a demand and decrease the output of gasoline during the season of minimum consumption. Economists for several years have pointed out the desirability of having this flexibility in refinery operations to take care of seasonal changes in demand and from the tank car price standpoint the situation in the Mid-Continent was never as favorable as it is now for this development. However, there are several factors which limit the application of this method of operating refineries. In the first place, despite the open market prices prevailing for distillate and gas oil fractions of refinery operations, they constitute cheaper raw material in the manufacture of gasoline than crude oil from the wells. Secondly, most refiners are committed to a certain octane rating in their finished gasolines and they cannot maintain this standard without operating their cracking facilities at capacity.

Still another angle is the fact that gas oil and distillate cuts from the crude oil in skimming plant operations often have too high a cold test to be suitable as furnace oil. It is necessary to crack these oils in order to reduce their viscosity. Many refiners would not be able to meet the usual furnace oil specifications except for the aid of recycle stock from their cracking stills. The net result of this situation is that most refiners with modern cracking facilities still look with favor on this phase of their operations and prefer to reduce charges to crude stills rather than pressure stills when any curtailment is necessary.

At this writing those in touch with the market were slow in making predictions as to when the gasoline market would recover from its slump of several weeks' duration. It was thought that the passage of a new proration law in Texas would stimulate buying on the part of jobbers but so far that hoped-for development has not materialized.

Not to Advance Crude

Marketwise, probably the most important development of the week was a statement in Tulsa on Saturday by E. G. Seubert, president of the Standard Oil Co. (Indiana) to the effect that the company had not changed from its previously announced position in refusing to meet the advances in crude oil schedules posted by several companies over a month ago. The head of the Indiana Standard, which is the largest buyer of Mid-Continent crude oils and the major refiner and distributor in the Middle West, said in effect that, the company would not advance its present posted crude oil schedules until such time as the increases were justified by conditions in refinery and retail markets. During the week there were several rumors coming from various sources to the effect that the crude oil buying agencies of the Standard of Indiana and Standard of New Jersey would meet the higher schedules and this would be followed by similar action on the part of several smaller buyers who are adhering to the Standard prices. The announcement of Mr. Seubert and a similar statement by subsidiaries of the New Jersey company apparently postpone indefinitely any unanimous increase in crude oil prices.

Those who still believe that the higher schedules can be made effective are now looking to Texas for improvement in refinery prices as the basis for a general upturn in gasoline quotations. Leaders of the industry over the past week have emphasized the necessity of curtailing crude oil production in Texas and a hearing covering this matter is to be held this week at Austin before the Texas Railroad Commission. The action taken, following this hearing not only in regard to allowable production in Texas but also the enforcement of regulations to prevent bootlegging, will have direct bearing on the gasoline market for next month.

Gasoline and Naphtha

In regard to quotations it is necessary to differentiate between Oklahoma gasoline and material quoted on an Oklahoma or Group 3 basis. Third-grade U. S. Motor gasoline was freely quoted in East Texas and some others points at 3½ and 3⅝ cents basis Group 3 for shipment to the Middle West states in which Oklahoma gasoline is being sold. However, strictly Oklahoma gasoline was generally quoted to the trade at a low of 3⅞ cents with resale prices one-eighth to one-fourth cent less. The usual differential of three-eighths cent was being maintained for the 57-65 octane and five-eighths cent for 65 and above octane.

Spot buying was very slow at any price and orders on contracts have also slowed up since early November. Some sales managers have come to the conclusion that reductions in gasoline consumption are more than seasonal. Others state that jobbers are still holding off in their buying in expectation of lower prices and they feel that the movement from refineries will improve with the first indication of price strength in the tank car market.

Inquiries in the Oklahoma market on 400, 390, 375 and 360 endpoint material are so few in number that it is difficult to determine the going market on these products. Some 400 endpoint gasoline has been quoted in Texas under 4 cents with 4⅛ cents the usual low quotation to the trade for Oklahoma material. Blending naphthas are sufficiently active that the small supply in Oklahoma is purchased from week to week. Sellers generally lower their quotation in line with the low octane U. S. Motor market.

There were enough buyers of all grades of fuels that sellers have been able to

(Continued on Page 31)

Analyses of Motor Fuel in Detroit Show Wide Differences in Knock Rating

By W. S. GILBREATH
Vice President, Automobile Club of Michigan

Motorists are not so much at the mercy of gyp gasoline companies as it may seem at first glance. Just which gasoline is better as a motor fuel always has been a problem. And right here let us state that the majority of advertised brands are usually everything the producers claim for them. However, occasionally some company or another becomes too enthusiastic in its claims for its products.

An investigation has just been completed by the Better Business Bureau, checking the qualities of various gasolines offered for sale in this district, and comparing the results with the advertising claims, with enlightening results.

Samples of gasolines were purchased over a period of eight days from various gasoline stations in this locality. These samples were sealed in containers, marked with code numbers and submitted to the Detroit Testing Laboratories for an analysis.

Twenty-five samples were tested on a C.F.R. engine, manufactured for the purpose by the Waukesha Motor Co. Each sample was submitted to a distillation test as well as tests for octane, vapor pressure, and gum.

The results were then tabulated and fell into three distinct groups, namely—"premium," "regular," and "sub-regular" or "third" grade fuel. the highest octane or antiknock qualities appearing in the first grade, or premium fuel. In the industry, "premium" gasoline usually sells at a higher price. A few "regular" gasolines now have high octane rating and consequently this classification is misleading.

These results were checked by recognized experts and the conclusions found to be reliable, according to the results of the analyses. The following table summarizes the information obtained in tests:

Sample	Distillation	Octane	Vapor pressure
	Group 1 (Octane 74 to 78.5)		
No. 8	OK	75.0	6.1
No. 10	OK	78.5	5.4
No. 12	OK	74.0	4.0
No. 13	OK	78 0	5.9
No. 15	OK	78.0	6.0
No. 16	OK	78.0	6.2
	Group 2 (Octane 65 to 69.7)		
No. 3	OK	69.7	7.1
No. 4	OK	66.0	6.45
No. 5	OK	66.0	6.5
No. 6	OK	66.5	7.2
No. 7	OK	65.0	6.85
No. 9	OK	66.0	7.2
No. 11	OK	67.0	7.3
No. 14	OK	69.0	8.0
No. 17	OK	65.0	7.7
No. 18	OK	67.5	7.2
	Group 3 (Octane 57 to 60)		
No. 1	50% Point outside U. S. Spec's. (286)	58.0	8.5
No. 2	50% Point irreg. (273)	60.0	7.6
No. 19	50% Point just inside U. S. Spec's. (283)	59.0	6.1
No. 20	50% Point just inside U. S. Spec's. (283)	59.3	5.4
No. 21	50% Point irreg. (277)	59.7	6.1
No. 22	50% Point just inside U. S. Spec's. (284)	60.0	7 4
No. 23	50% Point outside U. S. Spec's. (286)	60.0	7.2
No. 24	OK	60.0	6.3
No. 25	50% Point irreg. (276)	57.0	6.1

American Petroleum Institute Weekly Refinery Statistics

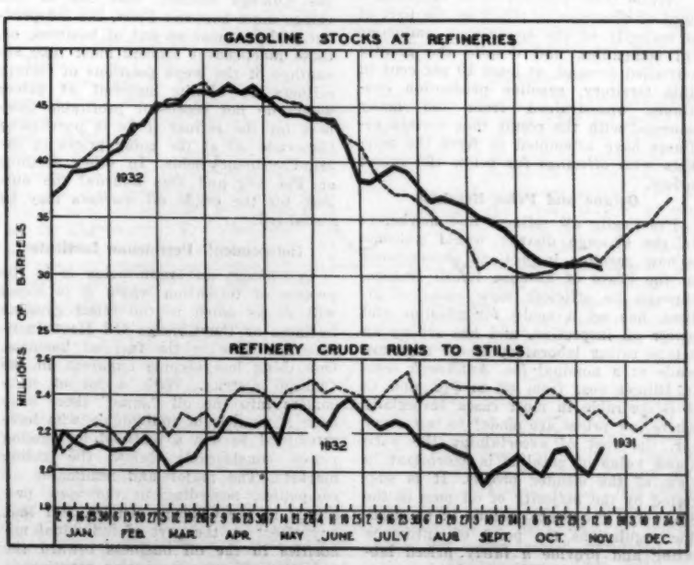
Figures below reported for week by American Petroleum Institute. (1) Per cent refinery capacity represented. (2) Daily average crude runs to stills. (3) Gasoline stocks. (4) Gas oil and fuel oil stocks. All figures in 42-gallon barrels.

Week Ending November 19, 1932, Compared to Week Ago

	Week ending November 19				Week ending November 12			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	424,000	3,612,000	9,290,000	99.1	471,000	3,787,000	9,079,000
Appalachian	95.0	87,000	968,000	760,000	95.0	90,000	936,000	792,000
Ind., Ill., Ky.	97.5	230,000	2,768,000	4,020,000	97.5	283,000	2,795,000	4,116,000
Okla., Kans., Mo.	88.4	196,000	2,861,000	3,011,000	88.4	199,000	2,743,000	3,074,000
Tex. Gulf	98.2	406,000	5,114,000	9,488,000	98.2	421,000	5,280,000	9,741,000
La. Gulf	97.3	88,000	1,075,000	2,455,000	97.3	87,000	1,093,000	2,660,000
Inland Texas	67.5	102,000	1,027,000	2,123,000	69.7	97,000	1,037,000	1,993,000
N. La. and Ark.	94.6	46,000	133,000	514,000	94.6	47,000	125,000	539,000
Rocky Mtn.	91.4	33,000	1,086,000	428,000	91.4	32,000	1,071,000	449,000
California	94.6	439,000	12,197,000	100,236,000	94.6	428,000	11,998,000	100,259,000
Total U. S.	93.2	2,103,000	30,841,000	133,346,000	93.4	2,136,000	31,016,000	134,302,000

Week Ending November 19, 1932, Compared to Year Ago

	Week ending November 19				week ending November 21, 1931			
	(1)	(2)	(3)	(4)	(1)	(2)	(3)	(4)
East Coast	99.1	424,000	3,612,000	9,290,000	100.0	404,900	4,127,000	10,209,000
Appalachian	95.0	87,000	968,000	760,000	91.8	99,900	1,201,000	1,634,000
Ind., Ill., Ky.	97.5	230,000	2,768,000	4,020,000	98.9	311,600	3,232,000	5,776,000
Okla., Kans., Mo.	88.4	196,000	2,861,000	3,011,000	81.6	244,700	3,665,000	4,892,000
Tex. Gulf	98.2	406,000	5,114,000	9,488,000	91.8	425,300	4,964,000	8,504,000
La. Gulf	97.3	88,000	1,075,000	2,455,000	100.0	106,700	827,000	3,264,000
Inland Texas	67.5	102,000	1,027,000	2,123,000	....	141,700	1,540,000	2,234,000
N. La. and Ark.	94.6	46,000	133,000	514,000	....	53,000	125,000	739,000
Rocky Mtn.	91.4	33,000	1,086,000	428,000	89.4	46,000	1,295,000	810,000
California	94.6	439,000	12,197,000	100,236,000	97.1	427,200	12,535,000	97,452,000
Total U. S.	93.2	2,103,000	30,841,000	133,346,000	95.2	2,261,600	32,511,000	136,264,000



Data based on weekly reports of American Petroleum Institute. Figures for week just ended not shown in graph but are included in accompanying table

Heating Oil Jobbers Finding Supplies Difficult; Gasoline Markets Soften in Chicago Area

By ROBERT C. CONINE
Chicago Bureau, The Oil and Gas Journal

CHICAGO, Nov. 21.—Heating oil jobbers who are buying their materials on the open markets are finding it increasingly difficult to obtain their requirements even at the comparatively high prices quoted by refiners throughout the list. The lighter domestic fuels, according to observers, are in greater demand than ever before and the supply available in the spot markets is inadequate to meet the needs of jobbers who are without contracts. Certain burning oils, especially the prime white materials, are practically in the kerosene price range, and although kerosene consumption has been augmented by substitution for lighting and heating purposes in sections where conditions are particularly acute, the heavier distillate cuts are far surpassing in demand any of the other refined petroleum products. The untreated low gravity fuels are reflecting the extent of boiler and other fuel utilization changes which have been made in Chicago district during the past year and a half. It is interesting to note that while manufacturers of oil burning equipment have doubled their production schedules the refiners are finding themselves in the position of having too much gasoline, which is moving slowly, and too little heating materials, which are in great demand. Obviously, this is hardly the fault of the refiners, although several major operators have for some time pointed out that gasoline production has been stressed while little consideration has been given to the demand for the heavier fractions. The problem is, so these observers say, how to produce sufficient of the cuts between 16° gravity and 40° gravity, without disastrous effect upon the already tottering gasoline markets.

Gasoline Markets Soften

While there appears to be expended a deal of constructive effort on the part of a majority of the major and semimajor oil companies, and despite the greatly curtailed demand, at least 10 per cent in this territory, gasoline production continues unrestrained from too many sources, with the result that certain refiners have attempted to force the markets with offerings far below the ruling prices.

Octane and Price Brackets

Practically all refiners and marketers in the Chicago district would welcome a new gasoline inspections arrangement in the State of Illinois. South Dakota, through its efficient state chemical offices, has set a model for gasoline and motor oil inspection, and has set up an octane rating laboratory where tests are made at a nominal fee. Antiknock tests in Illinois cost from $5 to $10, and as it is desirable in most cases (especially where low prices are made) to test every car, the cost of ascertaining the antiknock value of gasoline is exorbitant in view of the slender profits. It is suggested by the majority of oil men in the State that the State include in its gasoline regulations the point of antiknock rating and provide a fairly priced laboratory service. In Toronto, for instance, a gasoline from the Chicago district is being offered with a guaranteed octane rating of 57-54, yet the actual antiknock value of this material is 26 octane. One refiner, who operates in the Illinois and adjoining states' markets, has assured his buyers that he will furnish 65 octane gasoline although his plant equipment fits him for 54 octane gasoline (from Mid-Continent crude) at best.

It is proposed by certain Chicago district refiners that a new price scale be made in connection with antiknock values. Supposing that the ordinarily refined straightrun gasoline is 54 octane, the proposition is to set a price range which is a sixteenth of a cent above 54 octane gasoline for every octane point above 54. That is, the below octane gasoline be placed at 54 octane, and that for each succeeding octane point there be an incremental ratio of the original octane band. Most refiners, it may be said, find that their best effort produces an octane rating of 48 to 49 when processing a Mid-Continent crude oil. While in the face of this, there are refiners who do not hesitate to guarantee any octane number gasoline that is desired, although the actual octane rating of their gasoline may be something else, altogether. Supposing that fractional increments be added to the price of gasolines for each step up the octane ladder: The price today, Monday, of U. S. Motor would be (taking the low), 3¾ cents, and adding eight-sixteenths of a cent for 62 octane gasoline (the lowest of the regular branded materials) the price in this case for 62 octane gasoline would be eight-sixteenths, or half a cent above the low of the low octane bracket gasoline, or 4¼ cents.

Independent Organization

Independent marketing organizations have for some time felt the need of organized effort to establish a legitimate position. Although a number of jobbers and chain service station operators have kept their prices in line with the ruling markets, these operators have sympathized with other independents who have attempted to remain in business by cutting prices. At this time it appears in the Chicago district, that one of two things must happen: First, the independent jobbers must go out of business, or, these independent jobbers must take advantage of the weak positions of certain refiners to obtain material at prices which do not represent profitable business for the refiner if he is purchasing his crude oil at the going prices in the Mid-Continent fields. In other sections of The Oil and Gas Journal the outlook for the crude oil markets may be visualized.

Independent Petroleum Institute

In Chicago an organization is in the process of formation which it is hoped will do as much in the retail gasoline business as the Chicago Oil Heat Institute has done in the fuel oil business. One thing has become apparent in the Chicago district. With a lot of newcomers into the oil "game" there have been a number of individuals who have attempted to win a foothold by naming prices considerably below the ruling markets. The major and semimajor oil companies, according to the view presented in the Chicago district, feel that any effort on the part of individual minorities in the oil business toward the promotion of sane marketing practices is a constructive step which will do much to place the oil business on a profitable basis after several years of destructive price competition.

For the purpose of obtaining better marketing practices and harmony among the diversified minor interests in the marketing end of the oil business, a representative group of marketers and refiners is working towards a nuclear group which will appraise all interested groups of cost conditions controlling in the various branches of the industry. It appears that a number of newcomers have taken a hand in the oil business and have, after a few months, decided that the only way to obtain business is to undersell competition. More experienced confreres are of the opinion that the only way to make a profit is to figure the laid-in cost plus handling, and this, unfortunately, is often too near the posting made on the service station price at the trackage station. It appears now, however, that the competition of natural gasoline blends continues as a threat as long as certain major producers continue to unload this material on the markets. It is an accepted fact in this territory that natural gasoline is offered at prices closely approaching the lowest U. S. Motor and natural blends, now that certain refiners have found it expedient to hold their naphtha prices to the generally accepted standard. In other words, the refiners and natural gasoline producers can not continue to hold their prices exactly in line with the U. S. Motor prices. The reason is not far to find. Even the major refiners will report that their "oleum" sales have mounted. The most constructive step, as has been pointed out in The Oil and Gas Journal, is a rigid inspection by state authorities. This, a major executive says, "would guarantee to the state its just revenue and would at the same time iron out the inequalities in the marketing branch of the industry."

The Independent Petroleum Institute of America has been organized for the sole benefit of independent operators. The purpose, as stated in the incorporation papers of the institute, is for the unification and solidification of independent dealers and jobbers throughout the territory. The officers of this organization are Charles E. Gauer, of Bulk Service Stations, Inc., president; Lloyd L. Ellsworth, of Lloyd's Service Stations, Inc., and J. L. Newman, independent operator, secretary.

Although somewhat out of the range of the purposes of the independent organization, a number of subscribing members have decided to advance their lowest service station postings to the normal level of 13.6 cents. A number of the independent are not classifiable as price cutters but they are working with the institute as independent operators to advance prices to a justifiable level. Some of the independents say that they are satisfied with their revenue from parking and automobile servicing, but they say that they want to "throw in" with the less favorably situated independent service station operators. In some quarters this attitude of the marketers strikes a responsive chord, and it would not be surprising if a real organization should materialize.

The service station situation throughout the territory remains little changed. On November 9 the kerosene tank wagon market was reduced to 9 cents from 10.4 cents at Mason City. On the same date the Red Crown service station price was advanced to 20.4 cents from 19.1 cents at Grand Forks, N. Dak. On November 12, the Stanolind tank wagon price at Fargo was advanced from 15 cents to 18.6 cents, and the service station price at Grand Forks was advanced from 16 cents to 18.9 cents.

Gasoline Tank Car Markets

The gasoline tank car markets are reflecting the inability of refiners in Texas and the Mid-Continent to adjust their operations to the winter schedule. There is a superabundance of low octane gasoline and a scarcity of heating materials. U. S. Motor gasoline was offered Monday for resale as low as 3½ cents, Group 3. Prices to the trade were as follows: U. S. Motor gasoline, 3¾ to 4 cents; 60-62 400 endpoint, 4 to 4¼ cents; 64-66 375 endpoint gasoline, 4⅝ to 4⅞ cents; aviation grade, below 64 octane, 5⅛ to 5¾ cents; 68-70 360 endpoint, 4⅞ to 5 cents.

Special Naphthas Holding

The special naphthas were working toward higher prices before the main contract season opened. One of the grade, light cleaners, advanced a quarter of a cent to 6¾ cents.

Kerosene Tank Car Markets

The kerosene tank car markets are comparatively slow but demand is sufficient to keep prices well above the earlier levels to which gasoline prices appear to be tending. The 41-43 water white material is at 3½ to 3¾ cents, while the 42-44 water white kerosene is at 3¾ to 3⅞ cents.

Distillate Tank Car Markets

The distillate tank car markets are firm and jobbers are finding it difficult to obtain suitable material outside of contracts.

ADDITIONAL CONTRACTS

NEW YORK, Nov. 19.—The general purchasing agent, the Panama Canal, Washington, D. C., will open bids on November 28, on schedule 2,812, for supplying 1,000,000 gallons of gasoline.

A number of government petroleum contracts were reported awarded during the week, as follows:

Atlantic Refining Co., 400,000 gallons of fuel oil, at $17,000, for delivery to U. S. Engineer at Savannah, Ga.

The Texas Company, 60,000 gallons of gasoline at 8 cents per gallon for delivery to U. S. Engineer at New Orleans and 75,000 gallons of gasoline at 8 cents same delivery point.

Phillips Petroleum Co., 10,000 gallons of Ethyl Gasoline at 13.5 cents per gallon and 4,000 gallons at 14.1 cents, for delivery to the U. S. Engineer at Kansas City.

Henry H. Cross Co., Chicago, 20,000 bbls. of fuel oil for delivery to the U. S. Engineer at Memphis, at $9,000, f.o.b. Smackover, Ark.

Twin City Oil & Gas Co., Norfolk, 15,000 gallons of furnace oil, at $787.50, for delivery to U. S. Engineer at Norfolk, Va.

Gulf Refining Co., 75,000 gallons of gasoline at 8 cents per gallon for delivery to the U. S. Engineer at New Orleans.

Standard Oil Co. of Louisiana, 36,000 gallons of gasoline at 8 cents per gallon, less 2 per cent, for delivery to the U. S. Engineer at New Orleans.

Pure Oil Co., 1,000 gallons of mineral lard oil, at 22.74 cents, less 2 per cent, for delivery to Watervliet Arsenal, N. Y.

Tank Wagon Advance in East Coast Is Market Feature; Tank Car Prices Are Strengthening

By A. E. MOCKLER
New York Bureau, The Oil and Gas Journal

NEW YORK, Nov. 21.—A general advance of one-half cent per gallon in tank wagon and service station gasoline prices in New York and New England, announced early in the week and effective on November 16, was the outstanding development in last week's refined products market in the East. The increase was based both on the strong wholesale markets ruling at refineries and improved conditions in retail markets, where the price basis has been firming up recently after price cutting had carried the market to abnormally low levels.

While no change developed in refinery gasoline prices during the week, the market was showing further strength, and it was the consensus of opinion in market circles here that an advance of from one-half to 1 cent per gallon on both low and high octane motor fuels is but a matter of time. Gallonage was fairly well maintained throughout the period.

East Coast refineries have stepped up operations considerably in recent weeks, the expanded operations being attributed to the need for heavier kerosene production to take care of the present exceptionally active demand for this product. For the week ended November 12, daily average crude runs to stills at East Coast refineries were 471,000 bbls., with plants operating at 73.7 per cent of capacity. This compared with daily runs of 452,000 bbls., and operations at 70.8 per cent of capacity, for the previous week, and daily runs of 413,000 bbls., and operations at 64.7 per cent of capacity, during the closing week of October. The increase in refinery operations is but a temporary condition, it is indicated, and crude runs are expected to be again curtailed as soon as visible supplies of kerosene catch up with the demand.

Tank Wagon Gasoline

Effective November 16, Standard Oil Co. of New York advanced its tank wagon and service station prices one-half cent per gallon in New York and New England territory, and other major marketers immediately met the increase. The market is well established at the new levels, and the undertone continues strong, with a further increase looked for as soon as refiners make their long-expected advance in tank car prices.

Efforts on the part of some major companies to increase their business on premium grade fuels are still proving rather ineffective, and it is apparent that gallonage on premium fuels for the full year 1932 will record very heavy declines with most companies.

Refinery Gasoline

Tank car movement was fairly active throughout the week, and prices were steady at all principal marketing centers in this area. U. S. Motor fuel below 65 octane number is quoted at 6¼ to 6½ cents per gallon here and at Boston, with the Baltimore and Charleston markets quoted at 6¼ cents, all f.o.b. terminals. On the higher octane fuel, the market ranges 6½ to 7 cents per gallon at principal distributing points, the inside price applying to sales to contract buyers.

Reflecting increased refinery operations, there was some increase in gasoline stocks held in this area during the week ended November 12, but despite the increase, stocks are not burdensome, and appear to be concentrated in strong hands.

Refiners here are generally looking for an early advance in the tank car market, although the continued weakness in the Mid-Continent market has led to a little uneasiness in some quarters, where the possibility of an early up-turn in values here is questioned.

Jobbers, however, appear to continue optimistic on the market outlook, and are showing a tendency in most cases to keep their storage fairly well filled up.

Refinery markets remained strong and active throughout the week, with current production moving readily into consuming channels. Refiners continue to post 41-43 water white at 5½ cents per gallon, tank cars, f.o.b. terminals, but the market undertone is stiffening, and some sellers are predicting a 6-cent market before the close of the year. Stocks of kerosene on hand at East Coast refineries are small, and production has been increased by most plants during the past fortnight.

Tank wagon kerosene was likewise in strong position through the past week, with no changes in posted prices. Large integrated companies are attaining substantial gallonage in their direct sales through their retail gasoline stations, while volume of business through other distributing channels is reported to be running in excess of that reported at this time last year.

Gas Oil

Sellers continue to post 4 cents per gallon for gas oil in tank car lots, f.o.b. terminals, but the market is not strong at this figure, and it is reported that some spot sales are being made at prices fractionally under the posted figure. Demand is along routine lines. California gas oil continues a competitor in the Atlantic Seaboard, a cargo of 75,000 bbls. having reached Baltimore recently. This, it is understood, was a regular contract delivery to a large Baltimore utility company, and the arrival of the cargo did not affect the open market there. California gas oil can be laid down at East Coast ports at prices substantially under the prevailing market here, and continued competition from West Coast refiners is anticipated.

Fuel Oil

The stronger outlook in East Texas has tended to improve market sentiment with respect to bunker "C" oil here. While the market is quoted unchanged at 75 cents per barrel in bulk at terminals, the tone of the market is just barely steady at that level, and less talk is heard in trade circles regarding the likelihood of an early price increase.

Large marine consumers have booked their requirements for 1933 on a sliding scale price contract, and the market has again lapsed into its routine channels following the unusual activity during the contracting period.

Diesel Oil

Spot markets are steady and unchanged, with refiners quoting 28-30 Diesel oil unchanged at $1.65 per barrel, f.o.b. terminals, at principal East Coast ports.

Contract deliveries continue to account for the bulk of the current gallonage, with relatively little open market buying being done, in so far as marine consumers are concerned.

Industrial demand for Diesel oil has shown little change during recent weeks, and refiners report that they are getting a fair gallonage in the tank car market, which is quoted unchanged at 4 cents per gallon, f.o.b. terminals, for 26-30 oil.

Furnace Oil

Refinery furnace oil markets are steady and unchanged at 5 cents per gallon for 36-40 gravity oil, 4 cents for 32-36, and 3½ cents for 21 gravity industrial furnace oil, all prices f.o.b. terminal. Jobbing demand continues active, and refiners report that their volume of tank car sales thus far in the season is running ahead of comparable 1931 totals.

Retail furnace oil markets are likewise active, with prices unchanged on all grades. The bulk of the retail business is handled on yearly contracts, which makes for stabilization in tank wagon prices.

Lubs

Cylinder stocks again eased off in last week's trading, refiners having been unsuccessful in their effort to peg the market at price levels prevailing a fortnight ago. Revised quotations for lubs, f.a.s. New York, in barrels, follow: 600 filtered, 22½ cents per gallon, off one-half cent; 600 Warren E, 19½ cents, off one-half cent; 600 steam refined, unfiltered, 17½

(Continued on Page 42)

Exports and Imports of Refined Products; Receipts of California Oils in the East

By A. E. MOCKLER

NEW YORK, Nov. 21.—Gasoline for export eased off at the Gulf last week, and suppliers were offering U. S. Motor for prompt shipment at 4 cents. The market for the higher gravities remained unchanged, with 4½ cents nominally quoted on 60-62 400 endpoint, 61-63 390 endpoint, and 64-66 375 endpoint. No cargo business developed during the period, and no cargo inquiries were noted.

French buyers were in the market for two cargoes of crude oil, 7,500 to 8,000 tons each, for December loading, but up to the time of writing this business had not been closed.

Considerable gasoline export business on the part of the Soviet and Rumanian sellers is indicated by tanker charters fixed during the past week, and these suppliers, it is understood, are still underselling the U. S. Gulf market.

Only one price change was reported from Constanza in mail reports dated November 3, gas oil being 25 cents higher at $7.50 per ton. The market for other products was quoted as follows: Gasoline, light (corresponding to U. S. Gulf 64-66), $18.43 per ton; gasoline, heavy (corresponding to U. S. Gulf U. S. Motor grade), $14.26 per ton; lamp oil, $7.90 per ton; white spirit, first grade, $12.79 per ton; second grade, $12.68 per ton; fuel oil, $3.24 per ton.

Petroleum Exports

Routine export movement of refined petroleum products was again reported locally during the past week, although it was reported that inquiry for nearby deliveries was showing continued improvement, with operators looking for an increase in gallonage in the near future.

The following table shows exports of refined petroleum products reported from the local port during the three weeks ended November 12 (all figures in gallons unless otherwise noted):

	Week ended		
	Nov. 12	Nov. 5	Oct. 29
Gasoline	9,000	115,000	170,000
Naphtha	.....	760,000	.....
Kerosene	26,000	17,000	250,000
Fuel and gas oil	5,000	9,000	2,000
Lub oil	485,000	585,000	3,181,000
Pet., refined	60,000	1,195,000	300,000
	Pounds		
Petrolatum	125,000	18,000	.....
Paraffin wax	1,545,000	780,000	1,600,000
Refined	60,000	56,000	.....
Scale	420,000	65,000	357,000
Lub grease	785,000	835,000	595,000

Imports of crude and refined petroleum at the principal United States ports for the week ended November 12 totaled 687,000 bbls., a daily average of 98,143 bbls., compared with 742,000 bbls., a daily average of 106,000 bbls. for the previous week, and a daily average of 103,214 bbls. for the four weeks ended November 12. Details follow:

(Barrels of 42 gallons)

At Atlantic Coast Ports—	Bbls.
Baltimore	222,000
New York	285,000
Philadelphia	150,000
Others	30,000
Total	687,000
Daily average	98,143
Daily average four weeks	103,214

There were no imports at Gulf Coast ports during the week.

The week's imports consisted of 517,000 bbls. of crude petroleum and 170,000 bbls. of fuel oil.

California Oil Receipts

Receipts of California crude and refined petroleum at Atlantic Coast ports for the week ended November 12 totaled 192,000 bbls., a daily average of 27,429 bbls., compared with 188,000 bbls., or 26,857 bbls. daily during the previous week and a daily average of 33,536 bbls. for the four weeks ended November 12. There were no receipts of California oil at the Gulf during the week. East Coast receipts were made up of 117,000 bbls. of gasoline received at Philadelphia and 75,000 bbls. of gas oil at Baltimore.

At the close of the week the following cargoes of California petroleum were reported afloat for East Coast ports:

For New York: 11,000 bbls. of gasoline and 23,000 bbls. of paint thinner on the tanker Tamiahua (Richfield Oil Co. boat), and 78,000 bbls. of gasoline on the tanker Robert E. Hopkins (Tide Water boat).

For Perth Amboy, N. J.: 115,000 bbls. of gasoline on the tanker Sunoil (Sun Oil Co. boat).

For Tiverton, R. I.: 79,000 bbls. of gas oil on the tanker R. J. Hanna (Standard Oil Co. of California boat).

REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

EXCLUSIVE OF TAXES

The following quotations are exclusive of the Federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils, which became effective June 21, 1932.

Gasolines

	Nov. 22		Nov. 15	
OKLAHOMA (Group 3)—				
*U. S. Motor	.03⅞	.04¼	.04	.04½
60-62 400	.04½	.04½	.04⅝	.04⅝
64-66 390	.04½	.04⅝	.04½	.04⅝
64-66 375	.04½	.04⅝	.04⅝	.04⅝
68-70 350	.04⅝	.05	.04¾	.05¼
NORTH TEXAS—				
*U. S. Motor	.03¾	.04	.03¾	.04
60-62 400	.04	.04½	.04¼	.04½
64-66 390	.04¼	.04½	.04⅝	.04⅝
64-66 375	.04½	.04⅝	.04½	.04¾
64-66 360	.04¾	.04⅞	.04¾	.05
†NORTH LOUISIANA—				
*U. S. Motor	.04½		.04¾	
60-62 400	.04¾		.05	
†ARKANSAS—				
*U. S. Motor	.04½		.04⅝	.04¾
CHICAGO (Based on Oklahoma Group 3)—				
*U. S. Motor	.03¾	.04	.04	.04⅝
60-62 400	.04	.04¼	.04⅜	.04¾
64-66 375	.04⅝	.05	.04¾	.05
Aviation fighting grade	.05½	.05¼	.05⅛	.05⅜
68-70 360	.04⅞	.05	.04⅞	.05⅛

Octane Ratings—Above quotations cover price ranges on gasoline in which no octane rating is given. On November 22, in the case of the U. S. Motor and 60-62 400 endpoint grades, where an octane rating of 57-65, inclusive, is guaranteed, prices are three-eighths cent per gallon higher than quotations shown in above tables; where an octane rating of better than 65 is guaranteed, the prices are five-eighths cent higher. In the case of the remaining grades, gasolines of 65 octane rating or higher are quoted one-half cent higher than the quotations shown in above tables.

Unless otherwise provided by agreement of buyers and sellers, the Series 30 testing equipment of the Ethyl Gasoline Corp. is recognized as standard in determining octane ratings.

*Present distillation specifications on U. S. Motor gasoline are: 10 per cent evaporated, 167° F. maximum; 50 per cent, 284° F. maximum; 90 per cent, 392° F. maximum; residue not exceeding 2 per cent; maximum vapor pressure, 12 pounds. Additional specification on U. S. Motor gasoline available from bulletins of Bureau of Mines, Washington, D. C.

†For Arkansas, Louisiana and Mississippi delivery.

PENNSYLVANIA (inland refineries)—				
U. S. Motor	.06	.06½	.05¾	.06
60-62 400	.06½	.06½	.06	.06¼
64-66 375	.06½		.06¼	
68-70 350	.06¾		.06½	

Octane Ratings—In the case of U. S. Motor and 60-62 400 endpoint grades, same price differentials based on octane ratings as shown in above tables for Oklahoma and other Mid-Continent areas:

CALIFORNIA—(domestic movement only)—				
54-58 U. S. Motor	.06	.06¼	.06	.06½
58-60 400	.07	.07½	.07	.07½
EAST COAST—				
U. S. Motor, below 65 octane:				
New York (Bayonne)	.06¼	.06½	.06¼	.06½
Boston	.06¼	.06½	.06¼	.06½
Baltimore, Md.	.06¼		.06¼	
Charleston, S. C.	.06¼		.06¼	
U. S. Motor, 65 octane and above:				
New York (Bayonne)*	.06½	.07	.06½	.07
Boston	.07		.07	
Baltimore, Md.*	.06½	.07	.06½	.07
Charleston, S. C.*	.06½	.07	.06½	.07
GULF COAST (domestic) —				
U. S. Motor, 65 octane and above	.05½		.05½	.05¾
U. S. Motor, below 65 octane number	.04⅝	.04⅞	.04¾	.05

*Contract price.

Naphthas

	Nov. 22		Nov. 15	
OKLAHOMA (Group 3)—				
50-52 450 (blending)	.04		.04	.04¼
PENNSYLVANIA (inland refineries)—				
50-54 430-450 (blending)	.06	.06¼	.06	.06¼
ARKANSAS—				
48-50 450 (blending)	.04½	.04¾	.04⅝	.05
CHICAGO (Based on Oklahoma Group 3)—				
50-52 450 (blending)	.03½	.03⅝	.03⅝	.03⅞
Cleaners' naphtha, 56-58 gr., 200 i.b.p.-320 e.p.	.06½	.06¾	.06¼	.06½
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾	.08	.07¼	.08
Lacquer diluent, 140 i.b.p.-200 e.p.	.08¼	.08½	.08¼	.08½
Rubber solvent, 68-70 gr., 100 i.b.p.-300 e.p.	.06¼	.06½	.06¼	.06½
Stoddard solvent, 300 i.b.p.-410 e.p., over 100° flash	.06	.06¼	.06	.06¼
Pet. thinner, 290, 300 i.b.p.-415 e.p., over 83° flash	.05¼	.05½	.05¼	.05½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p.-330 e.p.	.06¼	.06½	.06¼	.06½
Petroleum spirits	.04	.05¼	.04	.05¼

Natural Gasolines

	Nov. 22		Nov. 15	
OKLAHOMA (Group 3)—				
Grade 18-55	.03½		.03½	
Grade 26-70	.02½	.02⅝	.02½	
Grade 30-70	.02⅝		.02⅝	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03½	.03⅝	.03⅝	
11 lb. v.p. (max.)	.04	.04¼	.04	.04½
NORTH TEXAS—				
Grade 18-55	.03	.03½	.03	.03½
Grade 26-70	.02¾	.02½	.02½	
Grade 30-70	.02⅝		.02⅝	
*Low vapor pressure grades:				
15 lb. v.p. (max.)	.03⅝	.03½	.03½	.03⅝
11 lb. v.p. (max.)	.04	.04¼	.04	.04¼
NORTH LOUISIANA—				
Grade 26-70	.02⅜		.02¾	
CALIFORNIA—				
75-78 375	.04¾	.05½	.04¾	.05½

Note—Grades 18-55, 26-70 and 30-70 are three of 24 grades adopted by the Natural Gasoline Association of America effective January 1. The grades are based on pounds vapor pressure and amount evaporated at 140° F. While not exactly the same specifications apply, Grade 18-55 corresponds to the former Grade A, Grade 26-70 to former Grade AA and Grade 30-70 to former Grade BB.

*All low vapor pressure grades have minimum recovery of 96 (natural gasoline method.)

Kerosenes

(All kerosenes water white)

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
41-43	.03½	.03⅝	.03½	.03¾
42-44	.03¾	.03⅞	.03¾	.03⅞
NORTH TEXAS—				
40-41	.03⅜		.03⅜	
41-43	.03½		.03½	
†NORTH LOUISIANA—				
41-43	.04		.04	
42-44	.04¼		.04¼	
†ARKANSAS—				
41-43	.04		.04	
PENNSYLVANIA (inland refineries)—				
45	.04⅝	.04¾	.04⅝	.04¾
46	.04¾	.04⅞	.04¾	.04⅞
47	.04¾	.05	.04¾	.05
CHICAGO (Based on Group 3)—				
41-43	.03½	.03¾	.03½	.03¾
42-44	.03¾	.03⅞	.03⅝	.03⅞
***CALIFORNIA—**				
38-40 high burning test	.04	.04¾	.04	.04¾
NEW YORK (Bayonne, N. J.)—				
41-43	.05½		.05½	
GULF COAST (domestic)—				
41-43 water white	.04¾	.05	.04¾	.05

*For Pacific Coast consumption.
†For Arkansas, Louisiana and Mississippi delivery.

Tractor Fuels*

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
39-40 prime white	.03⅜	.03½	.03⅜	
38-40 light straw	.03¼	.03⅜	.03¼	.03⅜
NORTH TEXAS—				
38-40 light straw	.03¼		.03¼	
CHICAGO (Based on Group 3)—				
38-40 light straw	.03½		.03½	
PENNSYLVANIA (inland refineries)—				
41-43 prime white	.04¼		.04¼	

*There are no standard specifications for tractor fuels. Grades commonly sold have flash under 175° F. (open cup) and under 575° F. endpoint and less than .2 per cent sulphur. Tractor fuels are available from all Mid-Continent refining groups at prices in line with the Oklahoma market taking into consideration differentials in freight rates.

Furnace Oils*

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
32-36 straw	.03½	.03¼	.03¼	.03¼
36-38 straw	.03¼	.03⅜	.03¼	
38-40 straw	.03¼	.03⅜	.03¼	.03⅜
39-41 prime	.03⅜		.03⅜	
NORTH TEXAS—				
38-40 straw	.03⅛	.03¼	.03⅛	.03¼
†NORTH LOUISIANA—				
36-40	.04		.04	
†ARKANSAS—				
32-36	.03⅜	.03½	.03¼	.03⅜
CHICAGO (Based on Group 3)—				
32-36 straw	.03¼	.03⅜	.03¼	.03⅜
38-40 straw	.03½		.03½	
PENNSYLVANIA (inland refineries)—				
40-41 prime white	.03¾	.04	.03¾	.04
NEW YORK (Bayonne, N. J.)—				
32-36	.04		.04	
36-40	.05		.05	
21 (industrial)	.03½		.03½	

*Above prices are for furnace oils of zero cold test under 190° F. flash and good odor.
†For Arkansas, Louisiana and Mississippi delivery.

Gas Oil, Diesel Oil and Fuel Oil

Gas oil (G.O.) quoted per gallon basis; Diesel oil and fuel oil per barrel.

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
32-36 (G.O.) cracking stock	.02	.02¼	.02	.02¼
U.G.I. (G.O.)	.02	.02⅛	.02	.02⅛
32-36 zero to 15 (G.O.) high flash	.02¾	.02⅞	.02¾	.02⅞
28-30, zero to 10	1.00	1.05	1.00	
26-30, zero to 10	.85	.90	.85	.90
24-26	.65	.70	.60	.65
20-22	.55	.60	.55	.60
Below 16	.45	.50	.45	.47½
NORTH TEXAS—				
32-36 (G.O.) industrial	.01⅞	.02	.01⅞	.02
22-26	.45	.50	.45	.50
Below 20	.40	.45	.40	.45
NORTH LOUISIANA—				
32-36 (G.O.) zero	.03¼		.03¼	
14-16	.40	.45	.35	.45
†ARKANSAS—				
30-32 (G.O.) zero high flash	.03¼		.03¼	
14-16	.40	.45	.35	.45
CHICAGO (Based on Group 3)—				
32-36 (G.O.) industrial	.02⅛	.02¼	.02⅛	.02¼
28-30 (zero)	1.10		1.10	
22-26	.72½	.77½	.72½	.77½
18-22	.62½	.67½	.60	.65
Below 18	.57½	.62½	.55	.60
PENNSYLVANIA (inland refineries)—				
36-40	.03¼	.03½	.03¼	.03½

Note—Fuel oils of more than 40 cold test generally 5 to 10 cents per barrel less in all areas than shown in above tables.

†For Arkansas, Louisiana and Mississippi delivery.

CALIFORNIA—				
30-34 (G.O.) per bbl.	.75	.85	.75	.85
27 plus Diesel	.75	.85	.75	.85
15-19 bunker (at tidewater)	.55	.65	.55	.65
15-19 (cargo lots)	.50	.60	.50	.60
15-19 (tank cars)	.40	.60	.40	.60
GULF COAST—				
28-30 (G.O.)	.03½	.03¾	.03½	.03¾
28-30 Diesel	1.50	1.65	1.50	1.65
Bunker C (bulk cargoes)	.45	.50	.45	.50
Bunker C (bunkers)	.60		.60	
NEW YORK (Bayonne, N. J.)—				
28 plus (G.O.)	.04		.04	
*28-30 Diesel	1.65		1.65	
26-30 Diesel (tank cars)	.04		.04	
†Bunker C	.75		.75	

*Lighterage 6½ cents per barrel.
†Lighterage 5 cents per barrel.

Petroleum Coke*

Prices per ton f.o.b. refineries in Chicago area.

Breeze (screenings)	5.50	5.50
Still runs	6.50	6.50
Lump and egg	7.50	7.50

*Refineries will absorb freight to 80 cents a ton.

Neutral Oils

(Viscosity at 100° F. and color)

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
Zero to 10 Cold Test:				
150-3	.06¼	.06½	.06¼	.06½
180-3	.07½	.07¾	.07½	.07¾
180-4	.07	.07¼	.07	.07¼
200-3	.08¼	.08½	.08¼	.08½
200-4	.08	.08¼	.08	.08¼
240-3	.09¾	.10	.09¾	.10
240-4	.09½	.09½	.09½	.09½
280-3	.11¼	.11½	.11¼	.11½
280-4	.10¼	.10½	.10¼	.10½

300-3.5	.11¾	.12	.11¾	.12
350-3.5	.12¼	.12½	.12¼	.12½
400-4	.12¾	.13	.12¾	.13
500-4.5	.13	.13½	.13¼	.13½
100-2 paraffin oil	.04¼	.04½	.04¼	.04½
15-30 Cold Test:				
200-3	.07¾	.08	.07¾	.08
200-4	.07½	.07¾	.07½	.07¾
240-3	.09¼	.09½	.09¼	.09½
240-4	.08¾	.09	.08¾	.09
280-3	.10¾	.11	.10¾	.11
280-4	.09¾	.10	.09¾	.10
PENNSYLVANIA—				
150 vis., No. 3, 400-405:				
Zero pour test	.12	.13	.12	.13
10 pour test	.11	.12	.11	.12
15 pour test	.10	.10½	.10½	.11
25 pour test	.09	.09½	.09½	
180 vis., No. 3, 25 pour test	.12	.12½	.12½	.13
200 vis., No. 3:				
Zero pour test	.18	.19	.19	.20
10 pour test	.17	.18	.18	.19
15 pour test	.16		.17	
25 pour test	.13½	.14	.14½	.15
30 pour test	.13		.14½	
GULF COAST—				
Pale Oils:				
100-2-2½	.04¾	.05	.04¾	.05
200-3	.06	.06¼	.06	.06¼
300-3	.07		.07	
500-3½	.08¾	.09	.08¾	.09
750-3½	.09¾	.10	.09¾	.10
1,200-3½	.11¾	.12	.11¾	.12
2,000-4	.12½	.13	.12½	.13
Red Oils:				
200-5-6	.05		.05	
300-5-6	.05¾	.06	.05¾	.06
500-5-6	.07¾	.08	.07¾	.08
1,200-5-6	.10¾	.11	.10¾	.11
2,000-6 plus	.12	.12½	.12	.12½
CALIFORNIA—				
Pale Oils:				
100-2½-3	.08	.08½	.08	.08½
200-2½-3	.08¾	.09½	.08¾	.09½
300-3-3½	.10	.10½	.10	.10½
350-3-4	.10½	.10¾	.10½	.10¾
400-3-4	.10¾	.11	.10¾	.11
450-3-4	.11¼	.12	.11¼	.12
550-3-4	.12	.12½	.12	.12½
Red Oils:				
200-4½-5	.08½	.09	.08½	.09

300-5-6	.09¼	.10	.09¼	.10
350-5-6	.10	.10¾	.10	.10¾
400-5-6	.10¾	.11¼	.10¾	.11¼
450-5-6	.11¼	.11½	.11¼	.11½
500-5-6	.11½	.12	.11½	.12
600-5-6½	.12	.12¼	.12	.12¼
700-6½ plus	.12¼	.12½	.12¼	.12½
750-6½ plus	.12¼	.12½	.12¼	.12½
900-6½ plus	.13	.14½	.13	.14½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
630 light green	.07¾	.08	.07¾	.08
600 light green S.R.	.05	.06	.05	.06
600 dark green S.R.	.04	.04½	.04	.04½
Bright Stocks:				
190-200 D	.17½		.17½	
150-160 D, 0-10	.15½		.15½	
150-160 D, 10-25	.15		.15	
150-160 D, 25-40	.14½		.14½	
150-160 E	.14½		.14½	
PENNSYLVANIA—				
600 S.R.	.09½	.10½	.10	.11
650 S.R.	.12	.13	.12½	.13½
600 Pennsylvania flash	.13	.13½	.13	.13½
630 D filtered	.19	.19½	.19	.19½
600 E filtered	.14	.15	.14	.15
Pennsylvania Grade bright stock:				
Bright Stock, No. 8 color, 145-50 vis.				
210-540-550 flash:				
10 pour test	.21	.22½	.21½	.23
15 pour test	.19½	.20½	.20	.21
25 pour test	.18	.19	.18½	.19½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Nov. 22		Nov. 15	
124-126 white crude scale	.01¾	.01⅞	.01¾	.01⅞
PENNSYLVANIA—				
122-124	.02½		.02½	
124-126	.02⅛	.02¼	.02⅛	.02¼
NEW YORK (Bayonne, N. J.)—				
Refined Wax:				
120-122	.02⅜		.02⅜	
125-127	.02¾		.02¾	
130-132	.03		.03⅛	
133-135	.04		.03⅞	
135-137	.04½		.04¼	
Petrolatum in barrels in carload lots:				
Dark green	.01¾		.01¾	
Amber	.02⅛		.02⅛	
Extra amber	.02½		.02½	
Cream	.04⅝		.04⅝	
Lily white	.05½		.05½	
Snow white	.06½		.06½	

Export Prices

GASOLINE				
GULF COAST—	Nov. 22		Nov. 15	
U. S. Motor	.04		.04¼	
60-62 400	.04½		.04½	
61-63 390	.04½		.04½	
64-66 375	.04½		.04½	
LOS ANGELES, CALIF.—				
U. S. Motor, 53-55 437 e.p.	.03¾	.04¼	.03¾	.04¼
U. S. Motor, 65 octane num.	.05		.05	
U. S. Motor, 67 octane num.	.05¼		.05¼	
U. S. Motor, 69 octane num.	.05½		.05½	
58-60 400 endpoint gasoline.	.04¼	.05	.04¼	.05
KEROSENE				
GULF COAST—				
41-43 prime white	.04½		.04½	
41 water white	.04⅝		.04⅝	
LOS ANGELES, CALIF.—				
41-43 water white	.03¾	.04¼	.03¾	.04¼
LUBRICANTS				
NEW YORK (f.a.s. in bbls.)—				
600 filtered	.22½		.23	
600 Warren E	.19½		.20½	
600 S.R. unfiltered	.17½		.18½	.19
650 S.R. unfiltered	.19		.20	.21
600 flash S.R.	.20		.21	.22
630 flash S.R.	.24½		.25½	.26
Bright stock, No. 8 color	.25		.26	
Bright stock, No. 6½ color, dil.	.24½		.25½	
NEUTRALS				
NEW YORK—Pale Engine Oil, Bulk (vis. at 100)				
230-3⅝	.10	.10¼	.10	.10¼
180-3½	.09½	.09¾	.09½	.09¾
100-2¼	.05	.05½	.05	.05½
Red Engine Oil, Bulk (vis. at 100):				
300-6½	.09½	.09¾	.09½	.09¾
250-6	.09	.09¼	.09	.09¼
200-6	.08½		.08½	

Crude Oil Prices

Oklahoma, Kansas, North and East Central Texas

East Texas (Oct. 15, 1932)* $1.10
East Texas (Oct. 1, 1932)† ..... .98
Corsicana heavy (Oct. 15, 1932)‡ ..... .74
Other fields ..... See gravity table

*Posted by Sun Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Panola Pipe Line Co., The Texas Company, Gulf Pipe Line Co., Toronto Pipe Line Co.
†Posted by Humble Oil & Refining Co., October 1, 1932; posted by Tidal Refining Co. and Atlas Pipe Line Co., April 11, 1932.
‡Magnolia Petroleum Co.

West Texas

Iatan and Westbrook..Same as North Texas
Crane, Upton, Crockett, Howard, Glasscock, Mitchell, Ector, Winkler and Pecos counties ..... See note below
Lea County, New Mexico ..... (See Rocky Mountain States)
Toborg, Pecos County* ..... $ .65

Note—Effective October 15, 1932, The Texas Company, Magnolia Petroleum Co., Shell Petroleum Corp. and Gulf Pipe Line Co., 75 cents; effective April 11, 1932, Humble Oil & Refining Co. and Stanolind Oil & Gas Co., 85 cents.
*Shell Petroleum Corp., effective October 14, 1932.

Texas Panhandle

Gray County, Wheeler County and Carson-Hutchinson Counties.... See gravity table

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers ..... See gravity table
Jennings, La. (Apr. 11, 1932)* ..... $ .75
Lockport, La...See Gulf Coast gravity table
Refugio, light ..... See gravity table
Refugio, heavy (Apr. 11, 1932)‡ ..... .80
Markham (Oct. 15, 1932)§ ..... See Gulf Coast gravity schedule
High Island (Apr. 11, 1932)¶ ..... See Gulf Coast gravity schedule

*Gulf Refining Co. ‡Humble Oil & Refining Co. §The Texas Company. ¶Yount Lee Pipe Line Co.

South Central and Southwest Texas

Darst Creek ..... See note below
Talling (Oct. 15, 1932)* ..... $ "
Mirando (Nov. 21, 1932)† ..... .70
Mirando (Oct. 15, 1932)* 1.00
Pettus (Apr. 11, 1932)† 1.00
Salt Flat ..... See note below
Thrall‡ .....
Lytton Springs (Lockhart) (Oct. 15, 1932)* 1.04
Dobrowolski§ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°
Somerset‖ .....
Same as Mid-Continent gravity scale up to and including 38-38.9°
Note—Darst Creek, effective October 15 1932, Magnolia Petroleum Co., The Texas Company and Gulf Pipe Line Co., 85 cents, effective April 11, 1932, Humble Oil & Refining Co., 75 cents. Salt Flat, effective October 15, 1932, Magnolia Petroleum Co and Shell Petroleum Corp., 85 cents; effective April 11, 1932, Humble Oil & Refining Co. 75 cents. Humble Oil & Refining Co posted 80 cents for Mirando crude oil on April 11, 1932.
*Posted by Magnolia Petroleum Co.
†Humble Oil & Refining Co.
‡Thrall prices same as North Central Texas, less 13½ cents per cwt. freight.
§Pioneer Oil & Refining Co.
‖Greyburg Oil & Refining Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades) ..... See note below
Urania, La. (Oct. 15, 1932) ..... $ .70
East El Dorado, Ark. (Oct. 15, 1932).. .75
Stephens, Ark., below 29° (Apr. 12, 1932) .61
Stephens, Ark., 29° and above (Apr. 12, 1932) ..... .64
Other fields ..... See gravity table

Note—Smackover, all grades, effective October 15, 1932, The Texas Company, Magnolia Petroleum Co., Louisiana Oil & Refining Co., Gulf Refining Co. of Louisiana, 75 cents; effective April 11, 1932, Standard Oil Co. of Louisiana, 60 cents. Urania posted by H. L. Hunt, Inc., and Louisiana Oil & Refining Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co Stephens, Ark., posted by Louisiana Oil & Refining Co. and Atlantic Oil Producing Co

Rocky Mountain States

OHIO OIL CO.-MIDWEST REFINING CO.
Iles, light (Aug. 24, 1931) ..... $ .75
Iles, heavy (Aug. 24, 1931) ..... .53
Fort Collins (Apr. 11, 1932) ..... .86
Florence (Apr. 11, 1932) ..... .80
Wellington (Apr. 11, 1932) ..... .76
Greasewood Dome, Colo. (Apr. 11, 1932) 1.00
Dutton Creek, Wyo. (Apr. 11, 1932) ..... .82
Rock Creek, Wyo. (June 1, 1932) ..... .90
Frannie, light (Nov. 3, 1931) ..... .61
Frannie, heavy (Nov. 3, 1931) ..... .51
Salt Creek ..... See Stanolind Mid-Continent price schedule
LaBarge..... Mid-Continent gravity scale
Big Muddy (Apr. 11, 1932) ..... .98
Grass Creek (June 1, 1932) 1.10
Elk Basin (June 1, 1932) 1.10
Lance Creek (Apr. 11, 1932) 1.15
Poison Spider (Mar. 5, 1931) ..... .70
Notches (Mar. 14, 1927) ..... .65
Hudson (June 2, 1931) ..... .65
Lander (Mar. 5, 1931) ..... .40
Rex Lake (Feb. 22, 1930) 1.10
Osage (Apr. 15, 1931) ..... .98
Lost Soldier (Apr. 12, 1932) ..... .80
Hamilton Dome (Nov. 3, 1931) ..... .45
Greybull (Apr. 11, 1932) 1.20
Cat Creek (Apr. 11, 1932) 1.20
Pondera (Nov. 3, 1931) ..... .90
Sunburst, Mont. (Apr. 11, 1932) 1.05
Hogback, N. Mex. (Aug. 24, 1931) ..... .80
Border, Mont. 1.55
Red Coulee, Alberta 1.55
Lea County, N. Mex. ..... See note below
Maljamar (Apr. 11, 1932) ..... .60
Artesia-Jackson (Apr. 11, 1932) ..... .65

Note—Salt Creek, Cat Creek, Dry Creek, Dallas-Derby, Hudson, Greybull, Hogback, and Iles by Midwest Refining Co. and remainder by Ohio Oil Co. Both companies posted Grass Creek, Elk Basin, Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted

(Continued on Page 30)

Crude Oil Gravity Table

Degrees gravity—	Kansas, Oklahoma, North Texas, East Central and Central Texas	Kansas, Oklahoma, North Texas, East Central Texas and Central Texas	North Louisiana and Arkansas	North Louisiana and Arkansas	Hutchinson, Carson and Moore Counties, Texas	Gray County, Texas	Hutchinson, Carson and Moore Counties, Texas	Gray County, Texas	Gulf Coast Texas and Louisiana	Gulf Coast Texas and Louisiana	Cameron Meadows, Louisiana	Salt Creek and La Barge, Wyoming
	1	2	3	4	5	6	7	8	9	10	11	12
Below 25	....	....	$ .80	$ .68	....	....	....	....	$ .90	$ .80	$ .80	....
25-25.9	....	....	.82	.70	....	....	....	....	.91	.81	.81	....
26-26.9	....	....	.84	.72	....	....	....	....	.92	.82	.82	....
27-27.9	....	....	.86	.74	....	....	....	....	.93	.83	.83	....
28-28.9	....	....	.88	.76	....	....	....	....	.94	.84	.84	....
Below 29	$ .88	$ .76	....	....	....	....	....	....	....	....	....	$ .76
29-29.9	.90	.78	.90	.78	$ .65	$ .77	....	....	.95	.85	.85	.78
30-30.9	.92	.80	.92	.80	.67	.79	....	....	.96	.86	.86	.80
31-31.9	.94	.82	.94	.82	.69	.81	....	....	.97	.87	.87	.82
32-32.9	.96	.84	.96	.84	.71	.83	....	....	.98	.88	.88	.84
33-33.9	.98	.86	.98	.86	.73	.85	....	....	.99	.89	.89	.86
34-34.9	1.00	.88	1.00	.88	.75	.87	$ .66	$ .76	1.00	.90	.90	.88
35-35.9	1.02	.90	1.02	.90	.77	.89	.68	.78	1.01	.91	.91	.90
36-36.9	1.04	.92	1.04	.92	.79	.91	.70	.80	1.02	.92	.92	.92
37-37.9	1.06	.94	1.06	.94	.81	.93	.72	.82	1.04	.94	.94	.94
38-38.9	1.08	.96	1.08	.96	.83	.95	.74	.84	1.06	.96	.96	.94
39-39.9	1.10	.98	1.10	.98	.85	.97	.76	.86	1.08	.98	.98	.94
40 and over	1.12	1.00	1.12	1.00	.87	.99	.78	.88	1.10	1.00	1.00	.94

Column 1—Effective October 15, in Kansas, Oklahoma, North Texas, East Central Texas and Central Texas by Sinclair Prairie Oil Marketing Co.; in Oklahoma, North Texas, East Central Texas and Central Texas by Magnolia Petroleum Co. (Magnolia's schedule begins below 28 degrees, 79 cents; 28-28.9 degrees, 88 cents, with 2 cents added for each degree upward to 40 and over at $1.12); in Kansas, Oklahoma and North Texas by Continental Oil Co.; in Oklahoma and North and Central Texas by The Texas Company; in Kansas and Oklahoma by Philtex Oil Co., Empire Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Gypsy Oil Co., National Refining Co.; in Oklahoma by Barnsdall Refineries, Inc., Deep Rock Oil & Refining Co., Producers Oil Co.; in North and Central Texas by the Gulf Pipe Line Co.; in Kansas by the Skelly Oil Co., Vickers Refining Co., White Eagle Oil Corp.

Column 2—Effective April 11, in Kansas, Oklahoma and North Central Texas by the Stanolind Crude Oil Purchasing Co.; in Kansas and Oklahoma by Carter Oil Co.; in East Central, Central and North Texas by the Humble Oil & Refining Co.; in Oklahoma by Mid-Continent Petroleum Corp., Champlin Refining Co., Eason Oil Co., Pepper Gasoline Co.; in Kansas by Derby Oil Co., and Kanotex Refining Co.

Column 3—Effective October 15, by The Texas Company, Louisiana Oil Refining Co. and Magnolia Petroleum Co., as per schedule above and Gulf Refining Co., whose schedule begins at below 29 gravity, 88 cents.

Column 4—Effective April 11, Standard Oil Co. of Louisiana and Stanolind Oil & Gas Co.

Columns 5 and 6—Effective October 15, Phil Tex Oil Co., as per above schedules, The Texas Company and Magnolia Petroleum Co. Texas and Magnolia schedules begin at below 35 gravity at 87 cents in Gray County and below 35 gravity at 75 cents in Hutchinson and Carson Counties.

Columns 7 and 8—Effective April 11, Humble Oil & Refining Co.

Column 9—Effective October 15, Sun Oil Co., Sinclair Prairie Oil Co., The Texas Company, Gulf Pipe Line Co., Pure Oil Co., Magnolia Petroleum Co. (in Lockport and Iowa Posts).

Column 10—Effective April 11 by Humble Oil & Refining Co. in Goose Creek, Hull, Liberty, Orange, Pierce Junction, Mykawa, Moss Bluff, Raccoon Bend, Barbers Hill, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge and Refugio light oil. On November 21, 1932, Humble Oil & Refining Co. revised its Gulf Coast and Refugio prices for oil below 25 degrees as follows: Below 20 degrees, 60 cents; 20 to 24.9 degrees 70 cents. Effective July 18, the Humble Oil & Refining Co. posted Conroe crude as follows: 35-35.9 gravity, 90 cents, with 2 cents added for each degree upward to 40 and over, at $1. Tidal Refining Co. met the Humble's schedule in Conroe on November 9, 1932.

Column 11—Effective October 15, Magnolia Petroleum Co.

Column 12—Effective April 11, Midwest Refining Co.

(California Crude Oil Prices on Page 30)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

November 22, 1932

TAXES

The gasoline quotations given in the following tables include the 1-cent Federal tax as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third or competitive grade is generally available at 1.5 or more cents per gallon under the service station price for the regular grade. Ethyl Gasolines are sold 3 cents above the service station price for the regular grade.

Standard Oil Co. (Indiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Chicago	18.1	18.1	4.0	10.0
Decatur, Ill.	17.6	17.6	4.0	10.1
E. St. Louis	16.9	14.9	4.0	9.3
Joliet	17.6	15.6	4.0	8.6
Peoria	17.6	15.6	4.0	10.1
Quincy	17.4	17.4	4.0	9.9
Davenport, Ia.	17.7	17.0	4.0	10.4
Des Moines	17.7	16.9	4.0	8.0
Mason City, Ia.	17.7	17.7	4.0	9.0
Sioux City	17.3	17.3	4.0	10.0
Duluth, Minn.	18.7	18.7	4.0	11.0
Mankato	18.3	18.3	4.0	8.1
Minneapolis	16.4	15.4	4.0	11.0
LaCrosse, Wis.	19.4	19.4	5.0	11.1
Green Bay, Wis.	18.8	18 8	5.0	10.5
Milwaukee	17.3	17.3	5.0	10.0
Madison	18.5	18.5	5.0	10.2
Detroit, Mich.	13.5	13.5	4.0	9.0
Grand Rapids	17.5	16.5	4.0	10.3
Saginaw	16.6	16.6	4.0	10.5
Evansville, Ind.	18.3	18.3	5.0	†13.9
Indianapolis	18.4	18.4	5.0	†14.1
South Bend	18.7	18.7	5.0	†14.4
Fargo, N. D.	20.1	20.1	4.0	12.0
Huron, S. D.	19.5	19.5	5.0	11.8
Sioux Falls	19.0	19.0	5.0	10.0
K. C., Mo.*	15.1	15.1	4.0	8.7
Springfield*	17.0	17.0	4.0	8.0
St. Louis	13.5	11.0	4.0	9.4
St. Joseph*	12.0	12.0	4.0	7.5
Wichita, Kans.	15.9	14.9	4.0	7.0
Bartlesville, Ok.	14.5	17.0	5.0	8.0

*State tax 2 cents, 1-cent city tax and 1-cent Federal tax.

†Includes 4-cent tax. Buyers of kerosene not used as motor fuel can secure refund of tax.

Effective November 4—New dump discount applicable on all grades of gasoline sold from tank wagon. Any tank wagon customer buying 25 gallons or more at one time will be given 1-cent discount per gallon off tank wagon price at time of delivery. Customers not under contract receive no other discount.

Effective January 1—Discounts on Q.D.A. on 500 gallons or more per month throughout territory; Red Crown Ethyl Gasoline, 3 cents off tank wagon price; Red Crown gasoline, 2½ cents off tank wagon price; Stanolind Blue gasoline, 1 cent off tank wagon price. On deliveries of 75,000 gallons or more each classification allowed 1 cent additional discount.

Discounts on resellers authorized agent's agreement: Same amounts as above except made off service station price instead of tank wagon price.

Stanolind Furnace Oil in Chicago

Effective November 1, 1932, prices f.o.b. Chicago, tank wagon prices: No. 1 (36-40 lt. stw. zero), 100 gallons or more, 7 cents; No. 2 (30-34 stw. zero), 150 gallons or more, 6½ cents; No. 3 (22-26 zero), 400 gallons or more 5.75 cents; No. 4 (12-16 zero), 400 gallons or more, 4.75 cents. Viscosity of No. 4, 90-115 at 100° F.

Fuel Oils

Chicago Oil Heat Institute Prices

Spot market prices on 350 gallons or over deliveries, and top prices on contracts, respectively: 38-40, 7 and 8 cents; 32-36 light, 6¾ and 7¾ cents; 32-36 dark, 6½ and 7½ cents; 28-30, 5¾ and 6¾ cents; 24-26, 5 and 6 cents; 18-22, 4¾ and 5¾ cents. On deliveries of less than 350 gallons the spot price is one-half cent higher.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Dallas, Tex.	14.5	17.0	5.0	8.0
Fort Worth	14.5	17.0	5.0	8.0
Houston	14.5	17.0	5.0	8.0
San Antonio	14.5	17.0	5.0	8.0
El Paso	16.0	18.0	5.0	10.0
Texarkana	*16.0	16.0	5.0	†11.0
Muskogee, Okla.	13.5	16.0	5.0	8.0
Okla. City	14.5	17.0	5.0	8.0
Tulsa	14.5	17.0	5.0	8.0
Ft. Smith, Ark.	*16.5	16.5	5.0	†10.0
Little Rock	16.5	16.5	7.0	†10.0

*Less 2½ cents to dealers. †Less 2 cents to dealers.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atlanta, Ga.	20 0	20.0	7.0	11.0
Augusta	20.0	20.0	7.0	11.0
Macon	20.0	20.0	7.0	12.0
Savannah	20.0	20.0	7.0	12.5
Birm'ham, Ala.	23.0	23.0	8.0	11.0
Mobile	22.0	22.0	8.0	10.0
Montgomery	23.0	23.0	8.0	13.5
Jackson, Miss.	20.0	20.0	7.0	10.0
Vicksburg	20.0	20.0	7.0	19.5
Jack'ville, Fla.	19.0	19.0	5.0	12.0
Miami	20.0	20.0	8.0	12.5
Pensacola	18.0	18.0	8.0	12.0
Tampa	20.0	20.0	8.0	13.0
Lexington, Ky.	18.5	18.5	6.0	10.5
Covington	19.0	19.0	6.0	10.5
Louisville	17.0	17.0	6.0	9.0
Paducah	19.0	19.0	6.0	8.0

A third grade "Kyso Green" is sold at a price generally 2 cents below the price on the regular grade.

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia include 1-cent tax. In Florida, an inspection fee of 0.125 cent; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline. To Pensacola, Montgomery and Birmingham state taxes add 1-cent tax. To Mobile state tax add 1-cent city tax. Dealers receive discount of 3 cents off tank wagon price throughout territory.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Denver, Colo.	16.0	19.0	5.0	12.5
Pueblo	16.0	19.0	5.0	12.5
Grand Jctn.	20.0	23.0	5.0	14.5
Casper, Wyo.	17.0	20.0	5.0	10.0
Cheyenne	16.0	19.0	5.0	11.5
Butte, Mont.	20.0	23.0	6.0	17.0
Billings	22.0	25.0	6.0	15.5
Great Falls	23.0	26.0	6.0	17.0
Helena	23.0	26.0	6.0	17.0
Salt Lake, Utah	17.0	20.0	5.0	16.0
Albu'que, N. M.	17 0	20 0	*7.0	14.0
Boise, Idaho	20.5	23.5	6.0	18.0
Twin Falls	20.5	23.5	6.0	18.0

*One-cent city tax.

Central South District

STANDARD OIL CO. (LOUISIANA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
N. Orleans, La.	16.5	16.5	*7.0	†12.0
Baton Rouge	17.0	17.0	6.0	†11.0
Alexandria	14.0	14.0	7.0	†8.5
Lafayette	18.0	18.0	7.0	†11.0
Lake Charles	18.0	18.0	7.0	†11.0
Shreveport	16.0	16.0	6.0	†11.0
Knoxville, Tenn.	13.5	13.5	3.0	11.5
Memphis	18.0	18.0	9.0	9.0
Chattanooga	13.5	13.5	3.0	11.0
Nashville	13.5	13.5	3.0	11.0
Bristol	19 0	19.0	3.0	12.0
Lt. Rock, Ark.	16 5	16.5	7.0	9.0

*Includes city tax of 1 cent. †Louisiana kerosene prices include 1-cent state tax. New Orleans kerosene price also includes 1-cent city tax.

Two-cent discount off kerosene tank wagon price and 2½ cents off gasoline tank wagon price to dealer and commercial accounts.

Ohio

STANDARD OIL CO. (OHIO)*

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Ohio points	17.5	18.0	5.0	*12.0

*Two cents off on gasoline tank wagon to dealers and commercial accounts; 2½ cents off tank wagon on kerosene to dealers.

Nebraska

STANDARD OIL CO. (NEBRASKA)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Omaha	17.9	18.9	5.0	10.25
McCook	19.0	19.0	5.0	11.75
Norfolk	18.75	18.75	5.0	10.75
N. Platte	19 0	19.5	5.0	11.5
Scottsbluff	19.5	20.0	5.0	11.25

Note—Dealers' discount allowed as follows: Red Crown Ethyl, 3 cents off station price; Red Crown, 2½ cents off normal service station price; Nebraska Blue (third grade), 1 cent off normal service station price.

New York and Part of New England District

STANDARD OIL CO. (NEW YORK)*

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Albany, N. Y.	16.0	17.0	4.0	9.0
New York	16.5	16.5	4.0	9.5
Buffalo	17.0	18.0	4.0	9.0
Rochester	17.0	18.0	4.0	9.0
Syracuse	17.0	18.0	4.0	9.5
Boston, Mass.	15.5	16.5	4.0	8.0
Augusta, Me.	18.5	19.5	4.0	9.0
Manch'tr, N. H.	18.5	19.5	5.0	8.0
Burlington, Vt.	19.0	20.0	5.0	8.5

*Discount schedule to commercial accounts as follows: At service stations, 1 cent per gallon; tank wagon deliveries up to 20,000 gallons monthly, 2 cents per gallon; 20,000 to 100,000 gallons, 2½ cents; 100,000 to 300,000 gallons, 3 cents; 300,000 gallons and up, 3½ cents.

Atlantic Coast District

STANDARD OIL CO. (NEW JERSEY)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Atl'tic City, N. J.	15.7	16.7	4.0	11.2
Newark	15.0	16.0	4.0	8.5
Annapolis, Md.	16.3	17.3	5.0	10.0
Baltimore	15.7	16.7	5.0	8.0
Cumberland	17.2	18.2	5.0	11.7
Wash'g'n, D. C.	14.2	15.2	3.0	10.0
Danville, Va.	18.4	19.4	6.0	11.9
Norfolk	16.8	17.8	6.0	10.3
Petersburg	17.9	18.9	6.0	11.4
Richmond	17.2	18.2	6.0	10.7
Roanoke	18.4	18.4	6.0	11.9
Charles'n, W.Va.	17.1	18.1	5.0	11.6
Parkersburg	15.7	15.7	5.0	10.2
Wheeling	16.7	16.7	5.0	11.2
Charlotte, N. C.	20.0	21.0	7.0	12.5
Hickory	20.2	21.2	7.0	12.7
Mt. Airy	20.3	21.3	7.0	12.8
Raleigh	19.8	20.8	7.0	12.3
Salisbury	18.0	18.0	7.0	12.6
Charleston, S.C.	17.8	18.8	7.0	10.3
Columbia	19.7	20.7	7.0	12.2
Spartanburg	20.0	21.0	7.0	12.5

Two cents per gallon discount off tank wagon price of gasoline to dealers except Washington, D. C., and Baltimore, Md., where discount is 3 cents. Kerosene 1 cent off tank wagon for 25 gallons or more under contract except New Jersey.

Naphtha

	Tank: Wagon	Tank: Car
Oleum spirits	10.7	6.23
V.M.P. naphtha	12.7	7.23
Cleaners' naphtha	15.2	9.23
Stanisol	15.2	9.23

Tank wagon prices f.o.b. Chicago January 6, 1932. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Canada

IMPERIAL OIL, LTD.

Imperial 3-Star Gasoline

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Hamilton, Ont.	24.0	27.0	6.0	16.5
Toronto, Ont.	24.0	27.0	6.0	17.5
Brandon, Man.	30.5	34.0	7.0	20.5
Winnipeg, Man.	27.5	31.0	7.0	17.5
Regina, Sask.	30.5	34.5	6.0	21.5
Saskatoon, Sask.	32.5	36.5	6.0	23.5
Edmonton, Alta.	30.5	34.0	5.0	22.5
Calgary, Alta.	27.0	30.5	5.0	19.0
Vancover, B.C.	28.0	31.0	7.0	24.0
Montreal, Que.	23.5	26.5	6.0	15.0
St. John, N.B.	27.0	31.0	7.0	22.0
Halifax, N.S.	26.0	30.0	6.0	22.0

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline: Tank truck†	Gasoline: Posted retail	Gasoline: Incl'ds tax of	Kero. tank wagon
Fresno	19.5	18.5	4.0	17.0
San Francisco	19.0	18.0	4.0	15.5
Los Angeles	18.5	17.5	4.0	15.5
Reno, Nev.	23.0	22.0	5.0	19.0
Portland, Ore.	20.0	19.0	5.0	16.5
Seattle, Wash.	22.0	21.0	6.0	16.5
Tacoma	22.0	21.0	6.0	16.5
Spokane	25.5	24.5	6.0	20.5
Phoenix, Ariz.	19.5	21.5	6.0	20.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Above prices are at company's plant or depots as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

Pennsylvania-Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incl'ds tax of	Kero. tank wagon
Pittsburgh, Pa.	16.5	17.5	4.0	10.0
Philadelphia	16.0	17.0	4.0	10.0
Scranton	16.5	17.5	4.0	10.0
Allentown	16.5	17.5	4.0	10.0
Altoona	16.5	17.5	4.0	10.0
Erie	16.5	17.5	4.0	10.0
Dover, Del.	16.5	17.5	4.0	10.0
Wilmington	16.5	17.5	4.0	9.0
Springf'd, Mass.	16.5	17.5	4.0	8.0
Worcester	16.5	17.5	4.0	8.0
Boston	15.5	16.5	4.0	8.0
Providence, R.I.	14 5	15.5	3.0	8.0
Hartford, Conn.	15.5	16.5	3.0	8.0
New Haven	15.5	16.5	3.0	8.0

Discount schedule effective November 1, 1932. In Delaware and Pennsylvania, 2 cents off station price on purchases of 2,000 gallons or more per month, in remainder of territory 1 cent. Wholesale discount 2½ cents per gallon on monthly deliveries of 20,000 to 100,000 gallons, 3 cents on 100,000 to 300,000 and 3½ cents on more than 300,000 gallons.

TANK WAGON CHANGES

(Regular Grade Gasolines and Kerosene)

Standard Oil Co. of Louisiana effective November 11 reduced gasoline tank wagon and service station prices 1 cent at Alexandria, La., 2 cents at Chattanooga and Knoxville, Tenn., and Little Rock, Ark., and one-half cent at Lake Charles and Shreveport, La.; same date reduced kerosene tank wagon prices 2½ cents at Alexandria, La. Effective November 12 reduced kerosene tank wagon price one-half cent at Chattanooga, Tenn.

Atlantic Refining Co. effective November 16 advanced gasoline tank wagon and service station prices 1 cent in the New England states.

Standard Oil Co. of New York advanced gasoline tank wagon and service station prices 1 cent in New York and the New England states.

Magnolia Petroleum Co. effective November 11 reduced gasoline tank wagon and service station prices 2 cents at Little Rock, Ark. The company officially has announced the following changes for the latter part of October: Dallas and Fort Worth, Tex., October 24, gasoline tank wagon 14½ cents and service station 17 cents, and October 26 kerosene tank wagon 8 cents; San Antonio, Tex., kerosene tank wagon 8 cents effective October 25; Muskogee, Okla., effective October 28, gasoline tank wagon, 14½ cents and service station 17 cents. Same changes effective at Tulsa and Oklahoma City, Okla., effective October 20; effective October 26 kerosene tank wagon 8 cents at Muskogee. Fort Smith, Ark., effective October 26 gasoline tank wagon and service station prices 16½ cents and kerosene tank wagon 10 cents; effective October 26 kerosene tank wagon at Little Rock, Ark., 10 cents. Above prices include state and Federal taxes.

Standard Oil Co. of Kentucky effective November 11 advanced kerosene tank wagon price at Pensacola, Fla., one-half cent to 12 cents; effective November 14 advanced gasoline tank wagon and service station prices 1 cent at Birmingham, Ala.

Standard Oil Co. (Indiana) effective November 9 reduced kerosene tank wagon prices at Mason City, Iowa, from 10.4 cents to 9 cents.

Continental Oil Co., effective November 21, advanced gasoline tank wagon and service station prices 1 cent at Boise and Twin Falls, Idaho.

CRUDE OIL PRICE CHANGES

Effective November 21 the Humble Oil & Refining Co. revised its Gulf Coast and Refugio price schedule on the lower grades as follows: Below 20 degrees, 60 cents; 20 to 24.9 degrees, 70 cents. The company has been paying 80 cents for all oil below 25 degrees in gravity. The same company also reduced Mirando, Tex., crude 10 cents, making its price 70 cents flat in that field.

The Tidal Refining Co. started posting prices in the Conroe Field in Montgomery County, Texas, on November 9 as

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NEWS FOR SALES DEPARTMENTS

Expanding Markets for Petroleum Coke in Eastern States

NEW YORK, Nov. 21.—The petroleum industry, which has in past years made inroads into the tonnage of the coal industry through the widespread popularity of domestic and industrial fuel oil burners, is entering into still more direct competition with coal interests through the steadily expanding distribution of petroleum coke as a fuel. New York and eastern coal markets are beginning to take notice of petroleum coke, which was first introduced into this area during the past year on an experimental scale, and which is now finding a steadily growing market.

Practically all of the petroleum coke marketed through the coal industry in the East thus far has come from the U. S. Gulf. The coke is shipped to tidewater at the Gulf in coal cars and loaded on coastwise vessels for delivery to coal wholesalers in the East.

While there are many grades and classifications for petroleum coke, the coal trade is apparently standardizing on breeze (screenings), still run, lump, and egg. The current market quotation on petroleum coke at the Gulf, where previously this products was sold almost entirely for export, is around $6 to $6.25 per ton, and the ocean freight is sufficiently low to permit of the selling of the product at a laid-down price in New York to compete favorably with other solid fuels.

Petroleum coke is marketed here in various forms. Sold in its straight form, the retail price is generally $11.50 per ton, the same price charged for other coke. Many handlers of the product, however, have adopted the practice of mixing petroleum coke with the cheaper grades of anthracite, such as rice and barley sizes, and the mixture is sold at from $5 and $6 per ton and upwards. Already trade names for these mixtures are being popularized here, two of the best known being "Thermocite" and "Bitracite."

One local fuel distributing organization, which has handled petroleum coke in extensive quantities, is at present reported to be planning the construction of a sizing plant in the New York Harbor district for handling petroleum coke exclusively. Refineries in the Bayonne district are not marketing their production of petroleum coke through the coal trade. Most of these refineries utilize practically all of their own production for refinery fuel, but as the domestic market for the product expands, it is quite possible that some of the major companies with refineries in the New York Harbor district will devote serious consideration to the marketing of their surplus output.

GLOBE COMPLETES STORAGE

TORONTO, Ontario, Nov. 19.—The Globe Petroleum Co. of Canada, subsidiary of the Globe Oil & Refining Co. of Illinois, has completed its 1,000,000-gallon storage tank here and has begun to operate, according to the industrial department of the Canadian National Railways.

DENY BARNSDALL-LION MERGER

SHREVEPORT, La., Nov. 19.—Official denial of reports of a merger between Lion Oil Refining Co. of El Dorado, Ark., and the Barnsdall Oil Corp. was made today by the Lion by Col. T. H. Barton, president of Lion.

Discuss Economic Aspects of Increasing Utilization of Heavy Oil Fractions

By S. B. ECKERT and A. E. PEW, JR.
Sun Oil Co.*

The crude oil production of this country in 1931 amounted to approximately 850,000,000 bbls., and estimated furnace oil sales to 36,500,000 bbls., or slightly more than 4 per cent of the crude oil produced. Furnace oils largely represent straight distillates from the crude; and, with few exceptions, are not the product of a cracking process.

In some instances cracked gas oils are used; but such oils are only lightly cracked, and can only be used if the ratio of carbon to hydrogen is comparable to that of the minimum grades of satisfactory straightrun distillates. This condition, as previously discussed, is due to present design practice in the majority of burners. It would appear that, therefore, under present conditions any increased consumption of burner oil requires the segregation of a larger percentage of straight distillate from the crude. We estimate that the average crude oil produced contains at least 20 per cent of distillate suitable for furnace oils under present burner designs. In view of the fact that consumption is only 4 per cent, there is, obviously, no shortage from the standpoint of potential availability. However, the availability of furnace oil fractions from the crude is dependent on another factor of increasing importance, viz., the cracking stills. A comparison of the product yields from the average crude produced in 1921 and 1930 is indicated in Table 3.

In 1931-32 the gasoline yield is estimated at 50 per cent of the crude, with corresponding decrease in fuel, gas oil, etc. In 1929, 33 per cent of the gasoline was made by cracking; in 1930 this increased to 37.7 per cent, and to 44.5 per cent in 1931; while the estimate for 1932 is approximately 46 per cent. These figures clearly show that the oil burner and the automobile are direct competitors for fuel. This competition is further enlivened by demand for higher compression gasoline, with consequent increased necessity for cracking.

Cracking plants operate chiefly on two charging stocks: 1, gas oil fractions, containing furnace oils; and, 2, fuel oil residuum, from the topping operation. Gas oil is often the preferred charging stock, as operating expenses per barrel of gasoline produced are lower than is the case when fuel is charged. However, this is not always the deciding figure, as account must be taken of the value of the charging stock as compared to the value of the resulting product—with the result that both oils are generally used as charging stock. Consequently, the economic effect of this situation is to create an interlocking basis of evaluating furnace oils and cracked gasoline. It would appear that gasoline has the advantage. At present, there is no serious competition for gasoline as a motor fuel; whereas the oil burner must compete with gas, both manufactured and natural, and with hard and soft coal coke.

From an economic standpoint it would appear that the oil burner should compete for its fuel, not with the automobile engine, but with fuel oil uses. The market for fuel oil is largely controlled by competition with coal and coke, which after all, are the real competitors of the domestic oil burner. It is probably out of the question to expect a domestic heater to operate on viscous fuels; but it is surely reasonable to expect the design of a unit which will operate on oils of such viscosity as will not require preheating. Cracked gas oils are characterized by heavy gravities, as compared to uncracked gas oils of the same boiling range and viscosity. They have a higher ratio of carbon to hydrogen than is the case with the straight gas oils and, accordingly, have a higher heat content per gallon. Gas oils which have been cracked to produce the maximum economic amount of gasoline have few outlets except as fuel oils—either being used in blends or straight products, depending on conditions. A domestic heater designed to use cracked gas oils would, therefore, from the refiner's viewpoint, compete for its fuel against fuel oil uses, and not against gasoline uses. It would, therefore, be on a better basis from an economic viewpoint; and, incidentally, would use a high heat content oil. Cracked gas oils can be made with identical boiling points, low viscosity, and freedom from coke or foreign matter, as is the case with the uncracked furnace oils. The difference would lie in heavier gravity, and in a higher ratio of carbon to hydrogen, with greater heat content per gallon. The variation in air required per gallon to produce complete combustion between a light gravity No. 1 oil and a high carbon ratio cracked distillate might be as much as 10 per cent.

The essential elements of a burner designed for cracked oils are proper atomi-

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TABLE 1—OIL CONSUMPTION—BARRELS PER YEAR

Year	Barrels		
	Mechanical draft	Natural draft	Total
1921	300,000	300,000	600,000
1922	540,000	500,000	1,040,000
1923	1,410,000	1,410,000	2,820,000
1924	2,840,000	2,180,000	5,020,000
1925	4,700,000	4,130,000	8,830,000
1926	6,820,000	2,895,000	9,715,000
1927	10,600,000	2,250,000	12,850,000
1928	14,340,000	2,863,000	17,203,000
1929	19,499,000	3,648,000	23,147,000
1930	25,170,000	4,620,000	29,790,000
1931*	30,960,000	5,540,000	36,500,000

*Estimated.

TABLE 2—NUMBER OF BURNERS OPERATING

Year Jan. 1:	Mechanical draft	Natural draft	Total
1921	5,000	7,500	12,500
1922	9,000	12,500	21,500
1923	23,500	35,300	58,800
1924	47,300	54,500	101,800
1925	78,500	103,000	181,500
1926	113,900	72,375	186,275
1927	177,000	56,250	233,250
1928	239,000	71,575	310,575
1929	324,980	91,200	416,180
1930	419,500	116,500	535,000
1931	516,000	138,500	654,500
1932*	614,500	160,000	774,500

*Estimated.

TABLE 3—PER CENT PRODUCT YIELDS FROM CRUDE

	1921	1930
Gasoline	27.1	42.0
Kerosene	10.5	5.3
Lubricating oil	4.7	3.7
Gas oil and fuel oil	51.9	40.2
Miscellaneous and loss	5.8	8.8

Note: Statistics given are taken from various sources such as the U. S. Bureau of Mines, American Petroleum Institute, U. S. Bureau of Census, and American Oil Burner Association.

*A.P.I. annual meeting, Houston, Tex.

Directors of A.P.I. Approve New Basis for Code Committee

HOUSTON, Tex., Nov. 18.—The board of directors of the American Petroleum Institute approved two resolutions originating in the general committee of the division of marketing, one indorsing and calling for continuance without change of the work of the department of accident prevention and the other establishing a basis for representation on state and regional code committees. The resolutions follow:

"Resolved, that the work performed by the accident prevention department of the American Petroleum Institute, and particularly the work of the standing committee on accident prevention in marketing, ably conducted by H. E. Dischinger, chairman, and H. N. Blakeslee, secretary, deserves the highest commendation; and

"Resolved further, that the general committee of the division of marketing urge the board of directors of the American Petroleum Institute to continue the department of accident prevention of the American Petroleum Institute as now constituted.

"Resolved, that in recommending representatives to serve on state and regional code committees, the various oil companies submit to the chairman, general committee, division of marketing, the names of the proper sales representative in authority over his company's sales in the particular jurisdiction covered by the particular committee, and that such representatives as are appointed to serve on code committees be instructed to attend every properly called meeting."

Poland Ratifies Control Board to Handle Exports

NEW YORK, Nov. 19.—The Polish government has established a new control board, Polski Eksport Naftowy, to regulate all petroleum exports from Poland. The new agency will decide upon plans for participation by all Polish oil companies in oil exporting operations, and will also act for the Polish oil industry in any international arrangements which may be made for establishing world market quotas and prices, such as was recently done through the agreement between the Rumanian Association of Petroleum Industrialists and the European-American oil group at Paris.

The official Polish export control body will establish for all Polish oil companies with annual production of 6,000 metric tons or more export quotas on all refined products sold for export. Refineries producing less than 6,000 tons annually may be exempted from sharing in export quota requirements through the payment of taxes to be used for research work, exploratory drilling, etc.

FORM EXPORT ASSOCIATION

NEW YORK, Nov. 21.—Conforming to the new Polish law requiring that petroleum exports be handled through a cartel, leading Polish oil companies have organized an export association.

Companies participating in the organization plans include the Malopolska (the French group), the Galicia Co., the Polmin Co. (the government-owned refinery) and independent operators of casinghead gasoline plants and small refineries not identified with the domestic cartel.

NEWS FOR PETROLEUM REFINERS

Plant Expansion Program Now Under Way in Russia

The near future will see a considerable increase in refining capacity in Russia, according to the Petroleum Times. Two pipe stills are being erected in Krasnodar, where an eight-still battery is also undergoing construction. The Krasnodar refinery will have a throughput capacity of 2,500 tons a day. Cost of erection 12,500,000 rubles. The plant will commence operations during the current year.

A cracking installation with a yearly throughput capacity of 1,200,000 tons is in course of construction at Saratov. The plant will be put into operation in 1933. A Winkler-Koch cracking plant is being erected in Khabarovsk; it is proposed to refine Sakhalin crude oil and produce petrol, lubricating oils, asphalt, etc. Yearly capacity 200,000 tons. Operations will commence in 1933.

Preparatory work is in progress for the erection of a large refinery in Orsk (Emba region). It is proposed to install six cracking units and two Badger pipe stills of 1,500,000 tons capacity. Cost of construction is estimated at 68,500,000 rubles. Operations are to commence in 1934.

These large refineries are intended for refining all basic grades of oil; the manufacture of special compound oils will be carried out by special lubricating oil plant, situated close to places of consumption. Among the latter must be mentioned the plant at Odessa, which will be producing 200,000 tons of various special lubricating oils. It is also proposed to erect a large bitumen plant, equipped with pipe stills for distilling kerosene. The proposed capacity will be 200,000 tons of bitumen and 200,000 tons of kerosene a year. The Odessa plant will supply the Odessa region, the whole of Ukraine, part of the western district and Belorussia.

It is proposed to erect not less than 15 similar plants during the second five-year plan.

In the district of Peresypi (Odessa region) an area of 40 hectares has been selected for the erection of a lubricating oil plant. It is proposed to complete the construction by 1933; the plant will produce motor oils, tractor fuel and other special oils. It is also proposed to erect a factory for the manufacture of greases.

Canadian Summer Gasoline Sales Show Large Decline

CHATHAM, Ontario, Nov. 19.—Official figures compiled by the transportation branch of the Dominion Bureau of Statistics from reports received from the provincial government departments administering gasoline taxes, show in July a further decline in Canadian gasoline consumption compared with the same month of 1931.

The following are the figures for the various provinces in gallons:

	July, 1931	July, 1932
Prince Edward Island	454,000	387,000
Nova Scotia	2,653,000	2,276,000
New Brunswick	2,112,000	1,662,000
Quebec	12,149,000	10,591,000
Ontario	31,536,000	23,037,000
Manitoba	3,392,000	2,915,000
Saskatchewan	4,801,000	3,451,000
Alberta	4,717,000	3,926,000
British Columbia	4,951,000	4,117,000
Total	66,795,000	51,351,000

The July sales for all Canada represented an increase of 0.3 per cent over the June total of 51,174,322 gallons but a decline of 23.2 per cent from the July, 1931, figure.

Government Data Show General Decline in Demand for Fuel and Gas Oils

Railroads, steamships, manufacturing plants, commercial and domestic heating and foreign trade all required less gas oil and fuel oil in 1931 than in 1930, according to a report released last week by the Bureau of Mines. Deliveries of such oils in 1931 by refining and marketing companies totaled 356,536,829 bbls., or 11 per cent less than the 401,209,692 bbls. reported for 1930. Corresponding deliveries in previous years were 423,572,930 bbls. in 1929; 405,960,095 bbls. in 1928; 388,137,801 bbls. in 1927, and 378,650,767 bbls. in 1926. Deliveries within the United States amounted to 327,305,780 bbls., or 10 per cent lower than the 1930 total of 364,759,808 bbls., while exports and shipments to noncontiguous territories decreased 20 per cent, or from 36,449,884 bbls. in 1930 to 29,231,049 bbls. in 1931.

The general decline in the demand for gas oil and fuel oil was reflected in the deliveries to practically every industry. With nearly all types of manufacturing greatly reduced, due to prevailing economic conditions, fuel oil requirements for industrial purposes naturally were less in 1931 than in 1930. Smelting and mining showed the greatest relative decrease in the quantity of fuel oil used in 1931, consuming about a third less than in 1930. The logging and lumbering industry required approximately a quarter less fuel oil in 1931, while the automotive, cement and lime, ceramic and food industries all showed about a 20 per cent decline in their 1931 demand, compared with 1930. A drop of about 4 per cent in the consumption of fuel oil by oil companies may be attributed largely to curtailed drilling and field operations in 1931.

The deliveries of light and heavy fuel oils for the heating of buildings declined from 43,279,000 bbls. in 1930 to 40,390,000 bbls. in 1931, a decrease of nearly 7 per cent. Deliveries for commercial heating, such as to schools, hospitals and office buildings, dropped from 17,508,000 bbls. to 15,731,000 bbls., or about 10 per cent. This decline may be attributed to the difference in weather conditions during the respective years. One calculation of "degree days" shows that the unusually mild weather in all sections of the country reduced the 1931 need for fuel, if based entirely on prevailing temperatures, by 16.3 per cent from the 1930 requirements.

Deliveries of oil for domestic heating did not decline as much as those for the heating of commercial buildings, there being only a 4 per cent drop from 25,771,000 bbls. in 1930 to 24,659,000 bbls. in 1931. The influence of weather conditions was offset to some extent by the additional installations of oil burners in homes during 1931. There were 773,400 domestic oil burners in use at the close of 1931, in comparison with 669,400 at the close of 1930, according to calculations made by private authorities.

In the regional distribution of gas oil and fuel oil, the Rocky Mountain area showed a loss of nearly 30 per cent in 1931, compared with 1930, while deliveries declined approximately 20 per cent in the Pacific Coast states. The South Central states and the South Atlantic states required about 10 per cent less fuel oil in 1931 than in the previous year. The smaller losses compared with 1930 were in the New England states, 5 per cent, and the Middle Atlantic states, 3 per cent.

BRITISH-AMERICAN REFINERIES

NEW YORK, Nov. 19.—The British-American Oil Co., Ltd., is the second largest refiner in Canada. The Montreal refinery, a modern combination skimming and cracking plant built last year, has a rated crude oil capacity of 15,000 bbls. daily with a cracking capacity of 7,000 bbls. daily. The Toronto refinery which the company has owned and operated for several years has a crude oil capacity of 6,000 bbls. daily and a cracking capacity of 3,000 bbls. daily.

In an article appearing in the November 3 issue of The Oil and Gas Journal, the crude oil capacity of the Montreal refinery was incorrectly given as 8,000 bbls. daily and the Toronto plant 5,000 bbls. daily.

WICKETT TO SUPPLY CRUDE

FORT WORTH, Tex., Nov. 19.—The Wickett Pipe Line Co. has signed a contract to furnish a new refinery being built at El Paso by C. M. McNutt with a minimum of 500 bbls. of oil per day for a year, beginning December 15. The oil will be shipped from Wickett by tank car to the refinery in El Paso.

The proration order of the Railroad Commission, made effective October 15, has been suspended temporarily in the Grandfall Pool, Ward County. The Wickett Pipe Line Co., which is one of the two purchasers in the area, has increased its runs to 1,500 bbls. per day, delivering same to the Wickett Refining Co. at Wickett.

CONDEMN TANK CAR PRACTICE

The general committee of the Division of Marketing of the American Petroleum Institute at Houston last week approved a resolution proposed by the committee on railroad transportation designed to correct confusion caused by tank cars at terminals and elsewhere. The resolution follows:

"The committee on railroad transportation, having considered confusion at terminals and other complications arising out of miscellaneous buyers' tank cars being sent to shippers,

"Be it resolved,

"1. That the committee on railroad transportation condemns the practice of the buyer supplying tank cars unless the buyer is a refiner and shipper; and

"2. That this resolution be referred to the general committee, Division of Marketing, for their approval; and

"3. That copies thereof also be sent to owners and operators of tank cars."

OPEN BALTIMORE TERMINAL

WASHINGTON, D. C., Nov. 19.—One of the most modern oil and coal distributing terminals in the world was opened on the harbor front of Baltimore, Md., during the past few days by the Baltimore Fuel Co.

The terminal is spread over an area of two and one-half acres and can handle 36,000 gallons of fuel oil and 10,000 tons of coal. It was erected at a cost of $350,000 and will be used only for wholesale distribution, operating a night service.—C. E. K.

Canada May Place Embargo on Russian Crude Imports

CHATHAM, Ontario, Nov. 19.—The first official pronouncement by the Canadian government on oil imports from Soviet Russia was made last week in parliament by Premier Hon. R. B. Bennett. He told the house that an investigation was being conducted by the department of national revenue into the nature of recent oil shipments from Russia to Canada in exchange for Canadian aluminum. If it should be found that Russian oil prejudiced importations from Trinidad, which enjoyed a preference in the Canadian market, it might be decided to place an embargo on Russian oil.

Premier Bennett stated that some time ago a large Canadian manufacturer of aluminum asked the Dominion government to agree to the exchange of aluminum for Russian hard coal. The government had replied that Russian coal was on the embargo list, and that the embargo would not be removed. But there were items of import not on the list, including Russian oil and consequently the aluminum company made arrangements to exchange its product for Russian oil.

A test of the oil, however, revealed that it was not crude oil but a mixture of crude, fuel oil and gasoline. Crude oil was allowed in free, but "built up" oil such as the Russian product was in a different category. When it became apparent the Russian shipment was a mixture, the matter became one for consideration by the department of national revenue. There was also the matter of unfair competition to be decided.

Pending a decision by the government, the imports are continuing. Last week the Danish tanker Aase Maersk arrived at Montreal with a further cargo of 9,000 tons of oil.

Pure Company Introducing New Lubricated Gasoline

CHICAGO, Nov. 19.—The Pure Oil Co. has completed preparations to introduce a new gasoline to be known as "Double Purpose Purol-Pep." The announcement in regard to the new gasoline states: "Not only does the new gasoline give smoother performance, greater power, faster cold-weather starting, better pickup and longer mileage but it also brings to the motorists Purol Upper Cylinder Lubricant scientificially blended in the right proportions."

The new gasoline is to be sold immediately in West Virginia, Ohio and Kentucky in the regular grade only. It is understood that the Standard Oil Co. of Ohio also plans to introduce a lubricated gasoline in Ohio.

TO LEASE REFINERY

The King Royalty Co. of Wichita Falls, Tex., has closed a deal with the Dixon Creek Oil & Refining Co. of Amarillo, by which the former acquired controlling interest in around 15,000 acres of leases in the field, and about 1,100 bbls. per day from 60 producing wells which have a daily potential in the neighborhood of 2,600 bbls. Six gas wells are included.

S. D. McIlroy, former president of the Dixon Creek Oil & Refining Co., will remain as member of the board of directors and vice president of the new company. The properties will be operated the same as in the past under the new management, with the exception of the refinery which will later be leased to the Kings Mill Refining Co.

NATURAL GASOLINE MANUFACTURE

Gulf Coast Taking 42 Per Cent Less Natural This Year

The large decline in the demand for natural gasoline on the part of Gulf Coast refiners for the first nine months of this year compared to that for the same period a year ago explains in a large measure the lesser refinery demand for natural in the Mid-Continent area. Mid-Continent natural gasoline manufacturers shipped a total of 402,822,000 gallons of their product to local and Gulf Coast refineries in the first nine months of 1932 while in the same period a year ago they shipped 564,858,000 gallons or nearly 30 per cent more. This analysis of shipments, together with that of natural gasoline stocks, etc., in the Mid-Continent area, was made by the Western Petroleum Refiners Association using Bureau of Mines data.

MID-CONTINENT NATURAL GASOLINE STATISTICS FOR FIRST NINE MONTHS OF 1931 AND 1932
(Thousands of gallons)

Production of Natural Gasoline in Mid-Continent Plants

	First 9 mos. 1931	First 9 mos. 1932	% ch'nge
Oklahoma City	36,000	57,800	+60.6
Osage County	51,400	36,100	—29.8
Seminole	147,600	87,200	—40.9
Rest of State	111,500	106,600	— 4.4
Ttl. Oklahoma	346,500	287,700	—17.0
Kansas	24,600	18,300	—25.6
Panhandle	159,700	128,400	—19.6
North Texas	25,100	19,100	—23.9
West Central	86,000	65,200	—24.2
Rest of State	54,200	53,500	— 1.1
Total Texas	325,000	265,200	—18.4
Louisiana	44,300	36,400	—17.8
Arkansas	20,700	15,200	—26.6
Total	761,100	622,800	—18.2

Natural Gasoline Used by Local Refineries
(Thousands of gallons)

	First 9 mos. 1931	First 9 mos. 1932	% ch'nge
Okla. and Kans.	166,362	143,556	—13.7
Inland Texas	106,722	97,138	— 8.9
Coastal Texas	206,632	103,614	—49.9
N. La. and Ark.	33,684	27,342	—18.8
Coastal Louisiana	52,500	31,122	—40.7
Total	565,950	402,822	—28.8

Stocks at Gasoline Plants September 30
(Thousands of gallons)

	First 9 mos. 1931	First 9 mos. 1932	% ch'nge
Oklahoma	7,385	10,849	+46.9
Kansas	586	910	+55.3
Texas	6,093	7,019	+15.2
Louisiana	868	820	— 5.5
Arkansas	235	268	+14.0
Total	15,167	19,866	+31.0

Stocks at Local Refineries September 30
(Thousands of gallons)

	First 9 mos. 1931	First 9 mos. 1932	% ch'nge
Okla. and Kans.	588	462	—21.4
Inland Texas	336	252	—25.0
Coastal Texas	8,694	5,334	—38.6
N. La. and Ark.	583	126	—78.6
Coastal Louisiana	252	...	—100.0
Total	10,453	6,174	—41.0

Shipments from Gasoline Plants
(Thousands of gallons)

	First 9 mos. 1931	First 9 mos. 1932	% ch'nge
Oklahoma	347,600	285,636	—17.8
Kansas	24,961	17,818	—28.6
Texas	326,915	264,186	—19.2
Louisiana	44,171	36,818	—16.6
Arkansas	20,812	15,134	—27.3
Total	764,459	619,592	—19.0

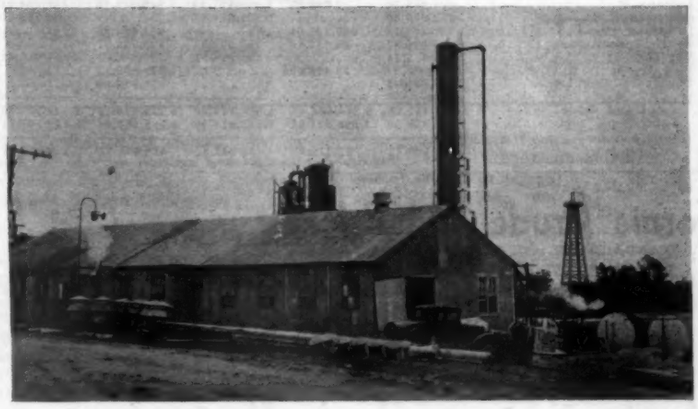
Composite of Statistics Covering All Areas in the United States
(Thousands of gallons)

	First 9 mos. 1931	First 9 mos. 1932	% ch'nge
Stocks at nat. gasoline plants, Sept. 30	25,308	24,628	— 4.6
Prod. at nat. gasoline plants	1,397,300	1,138,400	—18.5
Shipments from nat. gasoline plants	1,395,808	1,140,542	—18.3
Stocks at refineries, Sept. 30	103,908	122,472	+17.9
Used by refineries	1,103,760	801,906	—27.3
Refinery demand (receipts)	1,101,744	833,112	—24.4
Demand other than refinery receipts:			
Blended at nat. gasoline plants	5,076	1,222	—75.9
To jobbers, exports, etc.	135,684	180,894	+30.4
Balance, including losses	150,304	125,614	—16.4
Total	294,064	307,730	+ 4.6

Add to Capacity of Excelsior Company Gasoline Plant in East Texas Area

Additional capacity is under construction at the Excelsior Gasoline Co.'s plant in the Joiner area of Rusk County in the East Texas Field. The accompanying picture is that of the present plant which is processing approximately 3,000,000 feet of gas daily. This plant is equipped with six units. Gathering lines are being laid to increase the supply of gas and 3 miles of 2-inch line has been completed which will deliver the gasoline made at the plant to Poindexter Switch for rail shipment.

East Texas natural gasoline manufacturers have been handicapped in operating their plants in the East Texas Field because of the extensive gathering system necessary to bring a large enough supply of wet gas to the plants to make their operation economical. This in turn is caused by the necessity of conserving reservoir pressure to recover a maximum volume of oil from the sands. Because of the relatively low gas pressure that has characterized the East Texas Field the problem of conserving that pressure to produce a maximum quantity of oil has been complicated by the large number of wells drilled in the field. The total number now exceeds 8,600 and with an allowed production of but 40 bbls. of crude per day, the problem of getting an adequate and continuous supply of gas becomes apparent.



Bureau of Explosives to Consider Two Proposals

Two proposals of interest to the natural gasoline industry have been listed for consideration at the conference of Bureau of Explosives to be held December 14 at 30 Veasey Street, New York. One item to be considered is a proposal by the Bureau of Explosives to amend the regulations so as to make it mandatory to equip eduction pipes of tank cars used for the transportation of liquefied hydrocarbon gas and liquefied petroleum gas with check valves, and to conform to paragraph 431, as of October 14, 1932.

It is proposed to amend paragraph 432, freight, to read as follows: 432. Tank cars of other than I.C.C. 106-A type, used for shipping chlorine, liquefied hydrocarbon gas, or liquefied petroleum gas, must have the eduction pipes equipped with check valves.

The second item is a request from the Imperial Gas Co., Long Beach, Calif., to amend the specifications in order to afford authority to manufacture cylinders of lighter weight than at present authorized when to be used for lower pressure gases. It is proposed to change paragraph 4 of Specification 4-B to read as follows:

4. In place of paragraph 13 (b), the following: (b) Also minimum thickness of wall must be such that wall stress is not over 18,000 pounds per square inch for cylinders with longitudinal side seam nor over 24,000 pounds per square inch for cylinders without such seams: Provided, that a wall stress of not over 22,800 pounds per square inch is authorized for cylinders with copper brazed longitudinal side seams having strength of at least 150 per cent of the parent metal. The pressure for calculating wall stress shall be taken as the prescribed test pressure or 348 pounds per square inch, whichever is the greater. Add new paragraph 6 to Specification 4-B to read as follows:

6. In place of paragraph 11, the following: Cylinders must be designed, and marked under paragraph 22, for pressures not over 500 pounds nor less than 116 pounds per square inch.

California Plants Blow Less Residue Gas to Air

Year after year natural gasoline plants in California have been successful in decreasing the volume of natural gas blown into the air as waste. In 1929 a total of approximately 18,048,000,000 feet of gas were blown into the air as residue gas from plants located in California. In 1931 a total of only 9,182,000,000 feet were thus disposed of from these plants. These data were compiled as a report by the Federal Oil Conservation Board and in commenting upon similar data stated: "Only recently the Texas Railroad Commission issued an order making it mandatory to meter and report all residue gas going into the air from natural gasoline plants in Texas. Although no data on the total loss of residue gas in Oklahoma are available, it is estimated that the residue gas from all natural gasoline plants in the Oklahoma City Field totals 405,000,000 feet per day, of which one-half is blown to the air."

Gain in Airplanes Points to Increase in Natural Demand

WASHINGTON, D. C., Nov. 18.—A growing demand for motor fuels of low distillation range despite business conditions was indicated this week in a report by Col. Clarence M. Young, Assistant Secretary of Commerce for Aviation. The report showed that Federal airways maintained by the Aeronautical Branch of the Department of Commerce, the governing unit for all civil aviation, had been expanded to 19,500 miles. Other data showed increases in actual flying so far this year which contrasts with a general decline in gasoline consumption by motor vehicles. The rapid and steady increase in air express poundage, which is largely responsible for bringing many operating companies "out of the red," also was emphasized in the report.

In the calendar year 1931 the scheduled airlines flew 47,385,987 miles, as compared with 36,945,203 miles in the previous year, according to Colonel Young's report.

Passengers carried in 1931 totaled 522,345; in 1930, 417,505. In 1931 the airlines carried 9,643,211 pounds of mail, as compared with 8,513,675 pounds in 1930.

Express shipments for 1931 totaled 1,151,348 pounds, and for 1930 they were 468,571 pounds (excluding privately carried freight and express).

Passenger miles flown per passenger fatality in 1931 were 4,770,876, as compared with 4,322,802 in 1930, a passenger mile being the equivalent of one passenger flown per mile.

"Information as to activities of American-operated airlines for the first six months of the calendar year 1932 shows that these lines carried 248,954 passengers, 712,638 pounds of express and flew 24,668,414 miles during this period," said Colonel Young. "Each of these totals represented an increase over the first six months of 1931."

BUTANE-PROPANE HANDBOOK

Early in November Western Gas brought from the press the first edition of the Handbook of Butane-Propane Gases, which has been under preparation for the past several months. Contents of the volume deal with both general and technical phases of the liquefied petroleum gas industry in its several branches—production, transportation, distribution, utilization. Particular interest attaches to the publication due to its being the first compilation of reference data pertaining to this industry.

This first edition of the Handbook of Butane-Propane Gases represents the joint effort of a score or more individuals directly associated with butane-propane enterprises. Its range of subject matter is handled in 12 chapters.

In addition the handbook carries a catalog section giving detailed information on products designed for butane-propane service; a buyers' guide listing firms supplying equipment, appliances or services for the industry; a directory of central plants enumerating the operating town plants distributing piped butane-propane gases; a complete bibliography covering the literature on liquefied petroleum gases, and a detailed subject index to the book's contents.

Copies of the Handbook of Butane-Propane Gases may be ordered at $5 each from Western Gas, 124 West Fourth St., Los Angeles, Calif.

Caddo Parish Well Finds Skull of Unknown Animal

A strange cat-size creature, resembling no animal now living, has come back after 50,000,000 years to help tell scientists how the mammal tribe, to which man belongs, got its start toward mastery of the earth, according to a Smithsonian Institute report just published.

From half a mile under the earth the skull of this ancient beast has been brought to the surface by an oil well drill in Caddo Parish, Louisiana. In announcing the find, the Smithsonian said it is "one of the most remarkable discoveries in the history of vertebrate paleontology."

The skull, though small and insignificant in itself, brings long-wanted knowledge of conditions on earth when drying up of the great swamps was spelling the doom of dinosaurs and giving mammals a chance to develop unhindered. Mammals are warm-blooded, while the dinosaurs were reptiles and cold blooded.

The creature is important because scientists heretofore have known little about mammals in their early days. Most of the early mammals were so small and their bones so delicate that no trace of them can now be found.

This ancient animal belonged to what scientists call the "family periptychidae." Teeth in the skull show that it probably lived on insects. Presumably it was a dweller in the swamps where the dinosaurs wallowed, but, because it was able to live out of the mud and climb trees, the Smithsonian Institution said it was benefited by the change of climate that dried up the swamps.

Although an early sprout of the family tree, this creature has no living relatives today. Some scientists believe it may have been in the ancestral line of the hoofed animals.

NEW DRILLING IN ONTARIO

CHATHAM, Ontario, Nov. 19.—Vacuum Gas & Oil Co. of Toronto is reported planning to undertake extensive drilling operations on some of its acreage in western Ontario. It is understood that some of the new drilling will be done on acreage in the western end of Norfolk County, near Tillsonburg. Vacuum Gas & Oil Co. was a joint participant in one of the first tests drilled in this area near Maybee's Corners. Acme Gas & Oil Co. of Toronto has drilled nine wells in this area most of which secured a fair gas production.

J. GARFIELD WOLF KILLED

J. Garfield Wolf, an oil scout in Michigan for several years, was killed by a hit-run driver 6 miles south of Jackson, Mich. His home was in Fremont, Ohio. He had been leasing acreage in Jackson, Lenawee and Monroe Counties, Michigan.

Revival of Oil Activity Being Reported in Mexico

A revival of oil field activities in Mexico is predicted by the secretary of commerce and industry in a statement in which he said that this department has received a large number of drilling permit applications from petroleum companies. Mexican Eagle Petroleum Co. has been especially active and has centered its exploration operations in the Tehuantepec Field, especially about Puerto, Mexico, Minatitlan and Choapa.

Richmond Petroleum Co., Standard Oil Co. of California subsidiary, also holds considerable land in the same field as well as in the Tabasco area but it has cut down its exploration activities to a minimum awaiting supreme court decisions on disputed titles to oil land concessions it holds.

Richmond Petroleum Co., while not producing, is prepared to proceed immediately with drilling and the erection of a refinery across the bay from Puerto, Mexico, as soon as the titles are cleared up. While most of the activity is centered about the Tehuantepec Field, the department of industry reports there are indications of the Panuco Field near Tampico again resuming operations on a scale of eight years ago when it was the principal producing area of Mexico.

International Petroleum Co. (Seaboard Oil), has brought in a well at depth of about 2,200 feet with initial daily production of about 100,011 bbls. on Corcovado ranch on the right bank of Tamesi River, in a zone never before exploited for petroleum.

SUMMARY OF STATEMENTS RELATING TO BUSINESS OF VARIOUS PIPE LINES FOR MONTH ENDING OCTOBER 31

	Gross stocks	Runs from wells	Other receipts	Regular deliveries	Other deliveries
Nat. Transit	718,643.87	201,405.14	526,557.47	542,464.94	169,343.88
S. W. Pa. P. L.	325,982.63	58,914.82	621,440.61	392,799.58	418,985.26
Eureka P. L.	925,300.40	267,681.27	237,121.66	300,410.16	311,978.44
Buckeye P. L. (Macksburg)	286,984.63	222,134.39	160,574.44	263,102.67	126,802.62
Buckeye P. L. (Lima, etc.).	2,527,710.50	72,758.52	1,943,232.22	1,433,040.72	684,896.97
Buckeye P. L. (Cleveland).	31,108.08	11,013.22	210,610.31	1,901.45	226,214.39
Indiana P. L.	504,068.36	2,062.25	1,249,127.43	946,219.98	345,354.93
Southern P. L.	272,979.30	.....	151,671.87	.....	29,772.56
Bradford Trans.	346,855.74	390,401.02	.....	451,684.36	.....
N. Y. Transit	94,416.84	34,818.86	151,542.37	189,793.67	.....
Northern P. L.	226,666.94	.....	265,228.55	.....	298,566.83
Tide Water P. L.	587,026.57	23,442.49	.....	419,839.32	.....
Tuscarora Dev.	8,730.42	.....	.....	174,917.30	.....
Total Oct. 31	6,854,463.28	1,274,631.98	5,517,106.93	5,116,174.15	2,611,915.88
Total Sept. 30	7,296,653.59	1,206,921.91	5,013,874.09	4,523,132.44	2,412,767.81
Difference	441,190.31	67,710.07	498,232.82	588,041.71	199,148.07

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA
(Effective June 26, 1932)

For current purchases of crude oil at the well (unless otherwise specified.) (All gravities above those quoted take highest price offered in that field.)

Gravity—	Signal Hill (Long Beach)	Seal Beach, Alamitos Heights, Huntington Beach	Inglewood	Playa Del Rey	Olinda-Brea Canyon	Terrance	Richfield	Coyote Hills	Santa Fe Springs	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Athens, Rosecrans, Domingues	Montebello	Wheeler Ridge	Coalinga	Whittier-LaHabra
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	$.65	$.65	....	$.55	$.55	....	$.65	$.55	$.55	$.65
15-15.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
16-16.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
17-17.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
18-18.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
19-19.9	.65	.65	.65	.65	.65	.65	.65	.65	....	.55	.55	....	.65	.55	.55	.65
20-20.9	.69	.69	.71	.69	.69	.69	.69	.65	....	.59	.59	....	.65	.57	.59	.68
21-21.9	.74	.74	.77	.74	.74	.74	.74	.66	....	.62	.62	....	.67	.60	.62	.72
22-22.9	.79	.79	.82	.78	.79	.79	.79	.70	....	.69	.69	....	.70	.63	.65	.77
23-23.9	.84	.84	.88	.82	.84	.84	.84	.76	....	.75	.75	....	.73	.66	.68	.83
24-24.9	.89	.89	.92	.86	.89	.89	.89	.81	$.73	.81	.81	$.89	.76	.69	.72	.89
25-25.9	.93	.93	....	.91	.93	.93	.93	.86	.79	.87	.87	.93	.80	.72	.75	....
26-26.9	.97	.97	....	.96	.97	....	....	.90	.84	.92	.91	.97	....	....	....	....
27-27.9	1.00	....	....	....	1.00	....	....	.94	.89	.97	.94	1.00	....	....	....	....
28-28.9	1.03	....	....	....	1.03	....	....	.98	.94	1.02	.99	1.03	....	....	....	....
29-29.9	1.06	....	....	....	....	....	1.03	.98	1.07	1.02	1.06	....	....	....	....	....
30-30.9	1.09	....	....	....	....	....	1.05	1.02	1.12	1.05	1.09	....	....	....	....	....
31-31.9	....	....	....	....	....	....	....	1.06	....	....	1.12	....	....	....	....	....
32-32.9	....	....	....	....	....	....	....	1.10	....	....	1.15	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.14	....	....	....	....	....	....	....	....
34-34.9	....	....	....	....	....	....	....	1.18	....	....	....	....	....	....	....	....
35-35.9	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....	....

The Texas Company, effective June 26, posted same prices as the Standard Oil Co. in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield, Montebello, North Whittier and Santa Fe Springs.

The Union Oil Co., effective June 26, posted the same price as the Standard Oil Co. in the Signal Hill, Alamitos Heights, Seal Beach, Huntington Beach, Athens, Rosecrans, Dominguez, Torrance, Santa Fe Springs, Playa Del Rey, Coyote, Olinda, Brea Canyon, Richfield and Montebello. In Coalinga, Lost Hills, Kern River, McKittrick, Midway-Sunset, Elk Hills and Buena Vista Hills the Union Oil Co. met the Standard Oil Co.'s prices from 14 gravity upward, but posted a price of 50 cents for oil 11 to 13.9 degrees in gravity.

General Petroleum adopted Standard Oil Co.'s prices, effective June 26, in Rosecrans, Signal Hill, Alamitos Heights, Santa Fe Springs, Inglewood, Torrance, Brea Canyon and Olinda, up to 25.9 degrees; Richfield, Midway-Sunset, Kern River, Mount Poso, Round Mountain and Coalinga and posted in Rincon as follows: 22-22.9 degrees, 68 cents; 23-23.9 degrees, 73 cents; 24-24.9 degrees, 78 cents; 25-25.9 degrees, 83 cents; 26-26.9 degrees, 86 cents; 27-27.9 degrees, 89 cents; 28-28.9 degrees, 93 cents; 29-29.9 degrees, 95 cents; 30 degrees and over, 98 cents. In Rosecrans, General Petroleum Co. pays 65 cents for 14 to 19.9 gravity oil; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 74 cents; 22-23.9 degrees, 79 cents; 23-23.9 degrees, 85 cents, and Standard's prices for oil of higher gravity.

Associated Oil Co., effective June 26, met Standard Oil Co.'s prices in Signal Hill, Huntington Beach, Seal Beach, Alamitos Heights, Richfield, Torrance, Inglewood, Athens, Rosecrans, Domingues, Santa Fe Springs, McKittrick, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills, Lost Hills, Beiridge and Coalinga.

Kettleman Hills—The Union Oil Co., effective June 26, posted 33-33.9 gravity oil at 91 cents; 34-34.9 degrees, 93 cents; 35-35.9 degrees, 95 cents; 36-36.9 degrees, 97 cents; 37-37.9 degrees, 99 cents; 38-38.9 degrees, $1.01; 39 degrees and over, $1.03. Standard Oil Co., Associated Oil Co. and General Petroleum Co. adopted same price schedule on same day.

Santa Paula—The Union Oil Co. and The Texas Company, effective June 26, posted as follows: 14 degrees to 19.9 degrees, 66 cents; 20-20.9 degrees, 69 cents; 21-21.9 degrees, 72 cents; 22-23.9 degrees, 75 cents; 23-23.9 degrees, 78 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 84 cents; 26-26.9 degrees, 87 cents; 27-27.9 degrees, 90 cents; 28-28.9 degrees, 93 cents; 29 degrees and above, 99 cents.

Shields Canyon and South Mountain—The Texas Company, effective June 26, posted same prices as in Santa Paula.

Orcutt—The Union Oil Co., effective June 26, posted prices as follows: 16 degrees to 19.9 degrees, 55 cents; 20-20.9 degrees, 59 cents; 21-21.9 degrees, 63 cents; 22-22.9 degrees, 69 cents; 23-23.9 degrees, 75 cents; 24-24.9 degrees, 81 cents; 25-25.9 degrees, 87 cents; 26 degrees and above, 93 cents.

Playa Del Rey—Subject to a field gathering charge of 5 cents per barrel.

Newhall, McKittrick and Kern River—Standard Oil Co., effective June 23, 1931, posted 55 cents for oil of all grades.

Elwood Terrace—Standard Oil Co., effective June 26, 1932, posts 33-33.9 degrees, $1.04; 34-34.9 degrees, $1.10; 35-35.9 degrees, $1.16; 36-36.9 degrees, $1.22; 37-37.9 degrees, $1.28. All prices f.o.b. ships.

Ventura Avenue—General Petroleum Co. and Associated Oil Co. effective June 26 posted as follows: 23-23.9 degrees, 73 cents; 24-24.9 degrees, 77 cents; 24-24.9 degrees, 82 cents; 25-25.9 degrees, 88 cents; 26-26.9 degrees, 90 cents; 27-27.9 degrees, 93 cents; 28-28.9 degrees, 96 cents; 29-29.9 degrees, 99 cents; 30 degrees and over, $1.02.

Potrero—Associated Oil Co., effective June 26, posted same prices as are paid by all companies in Athens, Rosecrans and Domingues.

CRUDE OIL PRICE CHANGES

(Continued from Page 26)

follows: 35-35.9 degrees, 90 cents, with 2 cents added for each degree up to and including 40 degrees and above at $1. This is the same price as the Humble Oil & Refining Co.'s posting.

Crude Oil Prices

(Continued from Page 25)

by Continental Oil Co. Borger and Red Coulee posted by Imperial Refining Co. Lea County, effective October 15, The Texas Company and Shell Petroleum Corp., 75 cents; effective April 11, 1932, Humble Oil & Refining Co., 65 cents. Fort Collins, Wellington, Orchard, Florence, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro Oil & Refining Co.

Eastern States

JOSEPH SEEP PURCHASING AGENCY
(Effective October 3, 1932)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field) $1.72
Pennsylvania Grade Oil in Southwest Pennsylvania Lines 1.42
Penna Grade Oil in Eureka Pipe Line Lines 1.37
Penna Grade Oil in Buckeye Pipe Line Lines 1.32
Corning Grade Oil in Buckeye Pipe Line Co.'s line (Oct. 4, 1932) ..... .85
Ragland Grade Oil in Cumberland Pipe Lines (Kentucky) (Jan. 10, 1931) ... .60

PENNZOIL CO.
(Effective October 3, 1932)

Pennsylvania Grade Oil in National Transit Lines:
Group A $1.67
Includes Cochran, Franklin, Hamilton and Doolittle districts.
Group B 1.66
Includes Titusville district.
Group C 1.65
Includes Turkey and Tidiout districts.
Group D 1.64
Includes Bear Creek and Porkey districts.
Group E 1.62
Includes Eidenau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacy and Kinzua districts.
Price depends on length of pipe line haul to plant at Oil City.

TIDE WATER PIPE CO.
(Effective October 3, 1932)

Bradford, Pa. $1.72
Allegany, N. Y. 1.72

PURE OIL CO.
(Effective October 3, 1932)

Cabin Creek, W. Va. $1.37
Bradford Hollow, W. Va. 1.37
Kelly's Creek, W. Va. 1.37

Middle Western States

OHIO OIL CO.
(Effective April 11, 1932)

Lima $1.15
Wooster 1.25
Illinois 1.10
Indiana ..... .75
Princeton 1.10
Plymouth ..... Shut in
Western Kentucky 1.05
Midland, Mich. (July 13, 1932)* ..... .85
Muskegon (July 14, 1932)† .....
.....Mid-Continent gravity scale
Muskegon (June 30, 1932)‡ ..... .95
Somerset, Ky. (Apr. 25, 1932) ..... .85
Hart County, Ky. (June 10, 1932)§ 1.00

*Posted by Pure Oil Co. Old Dutch Refining Co. pays 20 cents per barrel over Pure Oil Co.'s posted price. †Naph-Sol Refining Co. ‡Old Dutch Refining Co. §Posted by Stoll Refining Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and delivered through own pipe line.

Mexico

Panuco* $0.43

*F.o.b. ship, based on September transactions and exclusive of production and export taxes and bar dues.

Canada

Ontario (Nov. 3, 1931):
Petrolia* $1.99
Oil Springs* 1.97
Alberta (Apr. 23, 1932):
Turner Valley†:
Crude oil 40-44.9 ..... 1.55
Crude oil 45-45.9 ..... 2.15
Crude oil 50 and above 2.80
Crude naphtha 3.32
Discolored naphtha 3.08

*Imperial Oil, Ltd. †Imperial Oil, Ltd., and Regal Oil & Refining Co.

A. P. I. Convention Had Many Interesting Phases

(Continued from Page 9)

sible, co-operate with the membership of the National and State Highway Users conferences, or other organizations having common interests.

"The members of the committee shall serve without compensation but shall have the power to elect a chairman and secretary from its own membership and it shall have the power to employ such personnel as may be necessary to carry out its purposes, policies, and plans. The salaries and expenses pertaining to said personnel and the actual expenses of members of the committee shall be paid by the Institute out of funds raised from its membership in the same proportion as funds for other purposes are raised.

"The personnel employed by said committee shall be a part of and on the payroll of the Institute, but shall function exclusively under the direction of the committee on the matters herein above specified, unless otherwise directed by the committee. Such personnel shall have office space in the office of the Institute.

Relief From Unjust Burdens

"The committee shall be responsible to the Institute for the active and vigorous prosecution of a campaign to protect the petroleum industry from and relieve it of unjust burdens resulting from discriminatory taxation or adverse legislation in any of the matters herein before mentioned and for the fostering and procuring of publicity and legislation where necessary or advisable to attain the same objects.

"The said committee shall encourage the organization in each state of the United States of a committee representing the petroleum industry in that state. The expense of said state committee shall be paid by the companies operating therein and to be proportioned on a gallonage basis. Regional committees shall be encouraged when possible and advisable and in such cases said regional committees shall be financed in the same manner and proportions as the state committees by the states represented therein.

"The activity of the committee hereby appointed shall be national in its scope and it shall in no case interfere in the activities of any state committee, except upon the request or consent of the companies represented in the state organization. It shall aid, and co-operate with all state committees to the fullest extent, consistent with harmonious effort.

"On account of the emergent situation and the almost immediate convention of Congress and the legislatures of almost all states, your committee recommends for consideration, as the first committee, the following named persons:

"H. T. Klein, The Texas Company, New York; E. S. Hall, Standard Oil Co. of New Jersey, New York; W. J. Guthrie, Gulf Refining Co., Pittsburgh; R. T. Osborne, Sinclair Refining Co., New York; James Cosgrove, Continental Oil Co., Ponca City; W. A. McAfee, Standard Oil Co. of Ohio, Cleveland; and Paul Gregg, Union Oil Co. of California, Los Angeles,

believing their knowledge of and familiarity with the work to be done peculiarly qualify them for the service."

Next Meeting in Chicago

The executive committee ratified action taken at the convention in Chicago last year and decided to hold the fourteenth annual convention in the Stevens Hotel, Chicago, October 24, 25, and 26, 1933, these dates permitting those in attendance at the Institute meeting to visit the World's Fair.

Divisional Officers Elected

The Institute's Division of Production, Refining, and Marketing elected the 20 members of their respective General Committees. Five additional members of each committee were appointed by President C. B. Ames. Following are the new General Committees:

Division of Production

Appointed by the president: W. N. Davis, Phillips Petroleum Co., Bartlesville; W. S. Farish, Humble Oil & Refining Co., Houston; Wirt Franklin, Wirt Franklin Petroleum Corp., Oklahoma City; J. Edgar Pew, Sun Oil Co., Philadelphia; and L. P. St. Clair, Union Oil Co. of California, Los Angeles.

Elected by the division: D. S. Bushnell, Northern Group of Pipe Lines, New York; C. E. Crawley, Consolidated Oil Corp., New York; O. D. Donnell, Ohio Oil Co., Findlay; A. Jacobson, Amerada Corp., New York; L. D. Jurs, Associated Oil Co., San Francisco; E. A. Landreth, Landreth Production Co., Fort Worth; C. H. Lieb, Carter Oil Co., Tulsa; M. E. Lombardi, Standard Oil Co. of California, San Francisco; W. L. McLaine, General Petroleum Corp. of California, Los Angeles; Marcus McLaughlin, Magnolia Petroleum Co., Dallas; E. J. Nicklos, Continental Oil Co., Ponca City; W. M. O'Connor, Atlantic Refining Co., Philadelphia; R. Ogarrio, The Texas Company, New York; A. W. Peake, Standard Oil Co. (Indiana), Chicago; E. H. Salrin, Tide Water Oil Co., Tulsa; H. M. Stalcup, Skelly Oil Co., Tulsa; H. R. Straight, Empire Companies, Bartlesville; T. E. Swigart, Shell Petroleum Corp., Houston; W. K. Whiteford, Barnsdall Oil Co., Tulsa; and K. Winship, Gypsy Oil Co., Tulsa.

Division of Refining

Appointed by the president: Frank B. Fretter, National Refining Co., Cleveland; W. M. Irish, Atlantic Refining Co., Philadelphia; E. J. Marston, Texas Pacific Coal & Oil Co., Fort Worth; P. M. Miskell, Empire Oil & Refining Co., Tulsa; and J. Howard Pew, Sun Oil Co., Philadelphia.

Elected by the division: Howard Bennette, Western Petroleum Refiners Association, Tulsa; C. B. Buerger, Gulf Refining Co., Pittsburgh; E. M. Clark, Standard Oil Development Co., New York; A. F. Corwin, Socony-Vacuum Corp., New York; L. R. Crawford, Producers & Refiners Corp., Independence, Kans.; F. B. Dow, National Petroleum Association, Washington; C. L. Henderson, Vickers Petroleum Co., Wichita; F. E. Holsten, Barnsdall Refineries, Tulsa; E. W. Isom, Sinclair Refining Co., New York; Emby Kaye, Skelly Oil Co., Tulsa; E. M. Lyons, Tiona Refining Co., Warren, Pa.; Walter Miller, Continental Oil Co., Ponca City; K. G. Mackenzie, The Texas Company, New York; F. E. Rice, Phillips Petroleum Co., Bartlesville; Noel Robinson, Tide Water Oil Co., New York; A. S. Russell, Standard Oil Co. of California, San Francisco; W. L. Stewart, Jr., Union Oil Co., Los Angeles; F. W. L. Tydeman, Shell Petroleum Corp., St. Louis; C. B. Watson, Pure Oil Co., Chicago; and R. E. Wilson, Standard Oil Co. (Indiana), Chicago.

Division of Marketing

Appointed by the president: W. H. Ferguson, Continental Oil Co., Denver; E. T. Moore, Simms Oil Co., Dallas; E. B. Reeser, Barnsdall Corp., Tulsa; Charles L. Suhr, Pennzoil Co., Oil City; and J. C. Van Eck, Shell Union Oil Corp., New York.

Elected by the division: W. T. Atkins, Skelly Oil Co., Kansas City; J. W. Carnes, Sinclair Refining Co., New York; H. D. Collier, Standard Oil Co. of California, San Francisco; S. B. Eckert, Sun Oil Co., Philadelphia; Frederic Ewing, Standard Oil Co. of New York, New York; H. D. Frueauff, Cities Service Co., New York; W. V. Hartmann, Gulf Refining Co., Pittsburgh; C. N. Humphrey, Standard Oil Co. of Nebraska, Omaha; Allan Jackson, Standard Oil Co. (Indiana), Chicago; V. H. Kelly, Union Oil Co. of California, Los Angeles; R. D. Leonard, Atlantic Refining Co., Philadelphia; R. W. McDowell, Mid-Continent Petroleum Corp., Tulsa; W. S. S. Rodgers, The Texas Company, New York; E. L. Shea, Tide Water Oil Co., New York; C. G. Sheffield, Standard Oil Co. of New Jersey, New York; C. S. Smith, National Refining Co., Cleveland; H. A. Trower, Phillips Petroleum Co., Bartlesville; W. G. Violette, Standard Oil Co. of Kentucky, Louisville; George C. Morris, Pure Oil Co., Chicago; and A. C. Woodman, Richfield Oil Corp. of New York, New York.

The Oil Man's Calendar

December

5—New Orleans, La., tenth annual Asphalt Paving Conference, and Association of Asphalt Paving Technologists.

5-9—New York, N. Y., American Society of Mechanical Engineers.

9—Annual meeting, Independent Petroleum Association of Texas, Fort Worth.

5-10—New York, N. Y., National Exposition of Power & Mechanical Engineers.

6-8—Omaha, Neb., Nebraska Petroleum Marketers, Hotel Fontenelle.

7-9—Washington, D. C., American Institute of Chemical Engineers.

21—Los Angeles, Calif., California Oil and Gas Association, annual Christmas Jinks, Sala d'Oro, noon, Biltmore Hotel.

(?)—Great Falls, Mont., Rocky Mountain Oil and Gas Association, Rainbow Hotel.

1933

January

9-10—Fargo, N. Dak., annual convention, Northwest Petroleum Association, North Dakota Division, Waldorf Hotel.

12-13—St. Paul, Minn., annual convention, Northwest Petroleum Association, Minnesota Division, Lowry Hotel.

16-20—Detroit, Mich., Highway and Builders Congress.

February

15-17—Columbus, Ohio, Ohio Petroleum Marketers Association, Deshler-Wallick Hotel.

March

23-25—Houston, Tex., eighteenth annual meeting, American Association of Petroleum Geologists. Society of Economic Paleontologists and Mineralogists, seventh annual meeting. Society of Petroleum Geophysicists, fourth annual meeting, Rice Hotel.

April

5-6—Hot Springs, Ark., Western Petroleum Refiners Association.

13-15—Tulsa, Petroleum Industry Electrical Association.

20-21—Cleveland, Ohio, National Petroleum Association, Cleveland Hotel.

May

(?)—Tulsa, Natural Gasoline Association of America.

June

26-30—Chicago, Ill., annual meeting, American Society for Testing Materials, Stevens Hotel.

Oklahoma Gasoline Market Shows No Improvement

(Continued from Page 21)

advance their quotations on some grades. A sale of 24-26 low cold test fuel at 65 cents was reported and another at 70 cents. High cold test material of the same gravity brought 50 cents. Buyers in both cases were after material that they could blend in making furnace oils. These products are so scarce that jobbers are using a variety of blending methods to secure a finished product at costs which will not be prohibitive in relation to the consumer prices.

Other top sales reported included a 28-30 zero fuel oil at $1.10 per barrel and prime white distillates at 3½ cents, which is the same price quoted for 41-43 water white kerosene by several refiners. U.G.I. gas oils were firm at a low of 2 cents with sales reported as high as 2¼ cents. The 32-36 gravity, low cold test gas oil suitable for furnace oil brought 3⅛ to 3⅜ cents in the Oklahoma market during the week.

Natural gasolines were stronger in Oklahoma the first of the week than they were in Texas, the latter market being at least one-eighth lower on all grades. The price range on 26-70 in Oklahoma was 2½ to 2⅝ cents and in Texas 2⅜ to 2½ cents. The 18-55 grade was generally quoted at 3 cents in Texas and one-eighth cent higher in Oklahoma. There were a number of jobber purchases of 26-70 and lower vapor pressure grades the first of the week.

There is sufficient demand for petroleum wax in the Mid-Continent to keep the market firm. The domestic demand for bright stocks and neutral oils is slow in Oklahoma and the same situation applies to the finished motor oils. Prices are unchanged.

Shallow Well Possibilities in Turner Valley District

The possibilities of getting production from the upper horizons of the Turner Valley Field are discussed in a letter from R. C. Paget, driller, of Calgary. Mr. Paget cites the recent completion of New McDougall-Segur Oil Co.'s No. 5 with a good commercial production from the McDougall-Segur sands as demonstrating that good crude production can be obtained in the field at small initial cost.

"The average well completed in the limestone with 6-inch casing has used at least two strings of casing of larger diameter than 12½-inch, together with expensive drilling and fishing tools and other equipment. Many more shallow wells such as the McDougall-Segur Co.'s latest producer can be profitably exploited using comparatively light standard rigs or portable rigs equipped for handling casing.

"The great majority of wells drilled in the valley have encountered small production in the upper horizons but have passed it up for the larger pay below in order to get quicker returns on the large capital outlay involved in heavy equipment and rigs. Now that gas conservation is an accomplished fact, I believe it would be well for the independents, in the interests of their shareholders, and many unemployed 'jarheads' to turn their attention to the development of these upper sands.

"Some years ago the McDougall-Segur Co. spudded its No. 3 well with the intention of drilling only to the McDougall sands. Surface water was shut off with a 12½-inch casing and 12½-inch open hole was carried to more than 1,900 feet at which 10-inch casing was run and underreamed. E. J. Cowles, one of the drillers of this well, assisted by myself, established what is still, I believe, a Turner Valley drilling record of 90 feet of hole in a 12-hour tour. Though this particular well did not encounter commercial production in the higher levels, it was completed in the limestone with a workable size of casing and this fact cannot be attributed solely to good luck, for the well certainly had more than its fair share of crooked hole and casing trouble."

Exports of Oil Equipment Reported Gaining Lately

WASHINGTON, D. C., Nov. 21.—Exports of petroleum and gas well drilling apparatus and other petroleum well and refining machinery during the month of September totaled in value $321,320. This compares with a total value of such exports in June of $300,982.

Of this machinery the Argentine took more than one-third or a total of $110,291 of which $87,478 was for refining and well machining other than for drilling purposes. This was a large increase for the Argentine which in June received such American machinery having a total value of $56,955. This is evidence of the great effort being made in the Argentine to increase its production and refining capacity as the opinion of some well informed oil men is that that country has about reached its peak in production which is not sufficient to care for domestic demand.

Mexico was second in the value of this machinery received from the United States in September which totaled $34,800, being largely for refining or $26,224 for that purpose.

Colombia also loomed up as a customer for refining and oil machinery not directly for drilling purposes, these classes of machinery having a value of $22,197 out of a total of $27,567.

The next largest importer of American machinery was Venezuela which took a total of $24,250 of oil machinery, two-thirds of which was for drilling purposes.

The Netherland West Indies took $18,873 worth of oil machinery of which $17,889 was for drilling. Trinidad and Tobago importations were valued at $14,249 of which $10,487 was for drilling.

Canada called for refining machinery to the extent of $9,174 with only $1,402 for drilling.

Rumania took more oil machinery than was taken in June, the total being $19,252, more than one-half of which was for drilling. Italy received $2,261 worth of oil machinery nearly all of which was for refining. France divided about equally in drilling and refining machinery, the total being $11,101. Germany received only about $1,300 worth of both classes of oil machinery.

Soviet Russia called for $15,252 worth of refining machinery and received no drilling apparatus. Exports to the United Kingdom were negligible, amounting to less than $500.

Late Fields

GULF COAST

HOUSTON, Tex., Nov. 22.—Another new field for the Gulf Coast was in the making Tuesday as operators were trying to pull screen to reset in Danciger Oil & Gas Co.'s No. 1 Hunt, W. Coirson Survey, northwestern Brazoria County, on the Pledger prospect. Thirty-one feet of screen was set in the sand at a total depth of 6,782 feet and the well started to blow in before drill pipe was backed off. However, the well now is killed but it is thought the screen has been blown up on the casing.

KANSAS

The Lario Oil & Gas Co.'s No. 1 Neufeldt, SW cor. NW, Section 34-21-3w, was drilling at 2,200 feet. It is a half mile east of production in the Nickel Pool. It will force three offsets if production is found.

Ramsey and others' No. 1 in the C SW NW NW, Section 18-27-3, Butler County, has landed 5-inch casing at 3,126 feet and was shut down.

Wolf Creek Oil Co.'s No. 3 Krehbiel, NW cor., Section 25-19-2w, in the Ritz-Canton Pool, McPherson County, is estimated at 250 bbls. a day from the chat at 2,923-75 feet.

Darby Petroleum Co.'s No. 1 Pankratz, NW cor. SE, Section 5-20-1, Marion County wildcat, found a hole full of water in the Viola lime at 3,286 feet and was drilling deeper at 3,326 feet.

J. E. Mabee, Inc. and others' No. 2 Martens, SE cor. NE SE, Section 19-22-3w, in the Hollow Pool, Harvey County, found the chat at 3,192-3,200 feet and has landed and cemented casing at 3,197 feet.

Producers & Refiners Corp.'s No. 1 Martens, NE cor. NW SE, Section 19-22-3w, in the Hollow Pool, Harvey County, was drilling at 2,900 feet.

Shell Petroleum Corp.'s No. 5 Johnson, SE cor. SW, Section 35-19-3w, in the Johnson Pool, McPherson County, found the chat at 2,960 feet, and after drilling to 3,011 feet standardized and expects to drill deeper into the formation in a few days.

The first Simpson sand test in the Blake area of Reno County is to be Gled Oil Co., Skelly Oil Co. and others' No. 1 in the NE cor. NW, Section 2-24-4w. The 18 wells drilled in the district, which consists of the eastern part of Reno County and the western part of Harvey County, have all found oil or gas production in the chat formation.

OKLAHOMA

Mid-Continent Petroleum Corp.'s No. 3 Tiger, in Section 9-7-8, Holdenville Field, Hughes County, Oklahoma, made 455 bbls. a day and 8,000,000 feet of gas a day from the Booch sand at 2,885-2,915 feet.

Manahan Drilling Co.'s No. 1 Long, in Section 10-7-8, made 437 bbls. of oil in 24 hours and 23,000,000 feet of gas a day from the Booch sand at 2,878-2,930 feet.

Rudiman and others' No. 1 Long, in Section 10-7-8, made 45,000,000 feet of gas and 10 bbls. of oil per day from the Booch sand at 2,888-2,930 feet.

Keyokla Oil Co.'s No. 1 Davis, in Section 14-7-8, found a showing of oil in the Calvin sand at 1,203-21 and 1,228-31 feet. Oil rose 140 feet in the hole. This well is a quarter of a mile extension to the south.

Winona Oil Co. and others' No. 1 Harjo, in Section 29-7-8, found the top of the Wapanucka lime at 3,007 feet, and was drilling at 3,073 feet in a rotary hole. This well is located a quarter mile southeast of production in the Fish Pool in Hughes County.

The Standard Oil Co. of Kansas' No. 1, NW cor. SW NE, Section 30-7-8, Seminole County, found the top of the Wapanucka lime at 3,075 feet and was drilling at 3,125 feet. The well is located about a quarter of a mile west of production in the Fish Pool.

Payne Drilling Co.'s No. 1, NW cor. SW NW, Section 27-6-4, Pottawatomie County, is a location 2 miles west of production.

Hilton Phillips and others' No. 1 Bradshaw, SW cor. SE, Section 21-7-4, Pottawatomie County, made approximately 20,000 bbls. of oil during a 10-day potential gauge and is now shut in. The oil was found in the Simpson at 4,155-58 feet.

J. M. Buchner and others' No. 1, C E half NW NE, Section 10-9-9, Hughes County, is a location.

Gilbreath and others' No. 2 Manning, in Section 14-7-8, found the Calvin sand at 1,207 feet, where oil rose 100 feet in the hole.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., Nov. 22.—O. R. Seagraves, trustee's No. 2 Lagasse, in the Saxet Field, which went wild Friday at 3,140 feet, was still wild early in the week and badly cratered and burning. The task of getting it under control seemed nearly hopeless. Other tests nearby have shut down.

Sarnosa Oil Corp.'s No. 3 well, important edge location in Sarnosa Pool, Duval County, total depth 2,421 feet, not fully completed, is estimated at 100 bbls. daily.

Magnolia Petroleum Co.'s No. 1 J. Riley, 330 feet from the north and east lines of the southwest quarter of Survey No. 45, on the west side of the North Government Wells Pool, is in the sand and looks like a big extension to the west.

WEST TEXAS

FORT WORTH, Tex., Nov. 22.—L. C. Harrison and others' No. 1 Addis, wildcat well in Ector County, started spraying oil from 3,855-63 feet. Tools were blown up the hole from an increase in gas at 3,862 feet. They were later removed from hole and it is estimated a 150 to 200-bbl. well flowing into pit. This opens up the third pool for the county and is the first important discovery made in West Texas since 1930.

COLORADO

DENVER, Colo., Nov. 22.—The Ramsey Petroleum Co.'s wildcat in the Buckingham district, in Julesburg Basin, Weld County, northeastern Colorado, is reported making 2 bbls. of water an hour with some oil.

RECONDITIONS PLANT

NEW YORK, Nov. 19.—In order to alleviate a sharp falling off in working hours of members of various departments at its Bayonne refinery, Tide Water Oil Co. has announced plans for an intensive "revamping" of units at its Bayonne, N. J., plant to provide more work for its refinery force.

"The company does not guarantee that this revamping will take care of all employes who have been working less than 40 hours per week, but the management feels that it will offer a considerable measure of aid to those most seriously affected," says Noel Robinson, vice president, in an announcement to the refinery employes. Men loaned for work on this construction program from other departments will receive the rate of pay of the job to which they are assigned.

OIL CASES IN SUPREME COURT

WASHINGTON, D. C., Nov. 21.—The Supreme Court of the United States has announced that it would recess from Monday, November 21, until December 5 to prepare opinions in a number of pending matters.

Oil interests will be interested in two cases the court announced it would review. In one it will decide whether an order of the Interstate Commerce Commission fixing rates on petroleum and products from southwestern points to North Dakota and northwestern Minnesota shall be approved and in the other, whether capitalized expenditures for drilling oil wells shall be considered by the Commissioner of Internal Revenue, subject to depletion or to depreciation allowances in calculating Federal taxes.

—C. E. K.

GASOLINE REVENUE GAIN

WASHINGTON, D. C., Nov. 19.—During the month of October the collection of gasoline and oil taxes jumped far beyond the tax collected in the preceding month, according to figures made public today by the Bureau of Internal Revenue, as follows:

Lubricating oils	$1,764,035.41
Gasoline	14,734,372.73
Pipe lines	585,074.32

These collections jumped from about $11,000,000 in the case of gasoline. The lubricating oil and pipe line taxes were also greater than in September.—C. E. K.

BOOK REVIEW

The completely revised second edition of "Treatise on Sedimentation," by William H. Twenhofel, department of geology, University of Wisconsin, Madison, Wis., just published, was prepared under the auspices of the committee on sedimentation, division of geology and geography, National Research Council of the National Academy of Sciences.

Doctor Twenhofel makes acknowledgement to several geologists in the preparation of the manuscripts of both editions. The same plan of presentation of the data has been followed but the second is much enlarged and has involved extensive search of literature, particularly foreign. The extensive bibliography is of great value. The book contains 960 pages with 121 illustrations and is from the press of Williams & Wilkins Co., Baltimore, Md., and sells for $8. It will prove of much interest to many in the petroleum industry and is so written as to appeal to both the layman and professional geologist.

Texas Statewide Hearing Called by Rail Commission

AUSTIN, Tex., Nov. 22.—The Railroad Commission of Texas, Oil and Gas Division, has issued the following notice of hearing on all oil and gas fields in the State, and especially the following districts and counties:

1. Panhandle district of Texas, including Gray, Hutchinson, Moore, Potter, Carson and Wheeler Counties;

2. East Texas Field, including Upshur, Gregg, Rusk, Smith and Cherokee Counties;

3. Van Field in Van Zandt County, Texas;

4. North Texas district, composed of Archer, Jack, Baylor, Clay, Cooke, Foard, Montague, Wichita, Wilbarger Counties, and all of Young County north of line drawn east and west through town of New Castle, Texas;

5. West Central Texas district, including Brown Callahan, Comanche, Coleman, Eastland, Erath, Jones, Fisher, Taylor, Palo Pinto, Shackelford, Stephens, Throckmorton, Haskell, Runnels and south Young Counties;

6. West Texas district, including Andrews, Crane, Crockett, Ector, Loving, Glasscock, Howard, Irion, Mitchell, Nolan, Pecos, Reagan, Scurry, Upton, Ward and Winkler Counties;

7. Gulf Coast district, including the counties of Orange, Jefferson, Hardin, Liberty, Chambers, Galveston, Harris, Washington, Austin, Fort Bend, Brazoria, Wharton, Matagorda, Refugio, Kleberg and Bee Counties, Texas;

8. Southwest Texas district, including the counties of Bexar, Atascosa, Bastrop, Williamson, Medina, Caldwell, Guadalupe, Milam, Live Oak, McMullen, Webb, Duval, Jim Hogg and Zapata Counties;

9. Strake or Conroe Field in Montgomery County, Texas.

Notice is given to all interested parties in every oil and/or gas field in the State, including the fields, districts and counties mentioned, that "the Railroad Commission will at 10 o'clock a.m., on November 26, 1932, at its hearing room in the state capitol at Austin, Tex., hold a hearing for the purpose of hearing evidence and passing and promulgating such rules, regulations and orders as from said evidence are necessary, in the opinion of the Railroad Commission of Texas, to prevent or lessen the physical waste resulting from the production of crude oil in any or all of the fields in the State of Texas, including those specifically set out.

"At such hearing evidence will be received and a decision will be made as to whether or not existing rules, regulations and orders heretofore adopted and promulgated for the respective pools, counties, fields or districts shall be revoked, amended or changed, or shall be kept in full force and effect under their present terms and for an additional period, and also what further or additional rules, regulations or orders shall be adopted for the enforcement of or pertaining to the conservation of oil and gas in the State of Texas, including the counties and fields above described.

"At such hearing the Railroad Commission of Texas will also hear evidence and adopt such rules, regulations and orders therefrom to carry into effect the various provisions of the law as adopted by the fourth called session of the Forty-second Legislature, known as Senate Bill No. 1, to prevent or lessen physical waste in Texas in the production of crude oil, and to protect the rights of the various producers of said oil."

The hearing previously called for November 25, covering the East Texas Field, is consolidated with the new call.

CANADIAN IMPORTS

Imports of natural gasoline in Canada during July tota'ed 1,444,396 gallons. During the previous month 2,812,792 gallons were imported. Receipts of gasoline, lighter than .8235 specific gravity at 60° temperature consisted of 3,438,619 gallons from the United States; 3,554,754 gallons from the Dutch West Indies and 22,541 gallons from Alaska.

SERVICE ON NEW FIELDS

KETTLEMAN HILLS, FRESNO, KINGS AND KERN COUNTIES, CALIFORNIA

Compiled by The Oil and Gas Journal, November 18, 1932

LOCATION OF FIELD

The Kettleman Hills anticline, consisting of three separate and distinct domes, is located in Fresno, Kings and Kern Counties, California, although the major part of present productive acreage lies within the confines of Kings County. The extreme western part of the North Dome extends over into Fresno County and the eastern end of the South Dome extends across the county line into Kern County. The North and Middle Domes have been proved up for production but the South Dome is still a blank. Subsequent development may change the status of the South Dome, however, as further exploratory work may be anticipated at some future date.

Geographical location.

The Kettleman Hills are located in the western part of the San Joaquin Basin between Lost Hills and Coalinga and extend in a northwest-southeast direction for a distance of approximately 30 miles.

Principal towns and cities near field.

The discovery well in the North Dome is about 20 miles southeast of Coalinga, 35 miles southwest of Hanford, 55 miles southwest of Fresno, 70 miles northwest of Taft and approximately 85 miles northwest of Bakersfield. This distance may vary somewhat, depending on the route selected for travel.

Cities and towns where supply houses have branches.

Coalinga is the nearest town to present activity.

Railroads serving area.

The A.T.&S.F. and the Southern Pacific railroad both serve this general area. The latter has a terminal at Coalinga and both systems have switching facilities at Hanford and Fresno. The truck haul from these points to the field is facilitated by excellent paved highways.

Sites available for supply houses.

There are a number of strategic sites available for supply houses but, due to the small number of companies operating in the Hills at the present time, it is doubtful if the establishment of branch offices would be justified.

Character of roads.

State highways in the San Joaquin Valley are of concrete construction and in excellent condition. Roads within the confines of the field are graded, oiled and rolled. These are in good condition and usable even during the rainy season.

Type of country.

Kettleman Hills, as the name signifies, consists of a range of hills which form a prominent topographic high as they rise from the Kettleman Plains to a height of approximately 700 feet and then gradually descend to a lower elevation as they meet the floor of the valley. The region is arid and, before the discovery of oil, was used principally for grazing purposes. Summer temperatures exceed 100° F. and decline in the winter to around the freezing point.

Trucking and hauling facilities available.

There are ample hauling and trucking facilities available.

Hotel and housing accommodations.

First-class hotels are available in Fresno and Bakersfield and smaller hotels can be found at Hanford, Coalinga and other adjacent towns in the vicinity. Housing accommodations are not much of a problem at Kettleman Hills as most operators furnish employes with living quarters at a nominal rental. At Kettleman City, located on the flat land west of the North Dome, realtors have erected a number of small houses and the usual quota of merchandising establishments.

PIPE LINES

A number of crude oil, natural gasoline and natural gas lines have been laid out of the Kettleman Hills Field since its discovery by the Milham Exploration Co. back in November, 1928. The Standard Oil Co. has a 10-inch crude oil line extending westward from Kettleman Hills to tidewater at Estero and an 8-inch natural gasoline line which parallels the original crude line. The Union has a 6-inch natural gasoline line extending from Kettleman Hills to tidewater at Port San Luis and two laterals from its 8-inch Coalinga-Port San Luis crude oil line. One of these laterals terminates in the Huffman area where the company has production, while the other affords a direct connection with the Kettleman North Dome Association's tank farm, located in Section 31-22-18. The Associated Oil Co. has a 6-inch crude oil line extending from Belridge to tidewater at Monterey. This line is routed via Kettleman Hills and consequently serves a double purpose as the oil from both fields is of relatively high gravity. The Associated Pipe Line Co. also has connections at Kettleman Hills as its 8-inch Taft to Coalinga line has an 8-inch lateral extending from the main trunk up into the field. The Shell, which does not have a main trunk line in the San Joaquin Valley south of Coalinga, laid a 6-inch extension from Coalinga to Kettleman Hills subsequent to discovery of the latter field. Eventually, the Shell will find it advantageous to extend its Martinez-Coalinga pipe line system southward to either the Mount Poso or Mountain View Fields but, due to curtailment, this program is being held in abeyance. The General Petroleum has a 6-inch crude oil line extending from Kettleman Hills to Belridge, where a connection is made with previous facilities extending from Belridge to Los Angeles. The General Petroleum acquired a block of acreage adjacent to tidewater in San Luis Obispo County a year or so ago preliminary to ultimately laying a new pipe line westward to the seacoast. The Texas Company does not have a crude oil line out of Kettleman Hills but has a 4-inch natural gasoline line extending from the North Dome to Coalinga.

There are four natural gas lines out of Kettleman Hills, two going north to the San Francisco Bay region and a like number extending southward to the Los Angeles Basin. The northern lines include the Pacific Gas & Electric Co.'s 16-inch transmission line from Buttonwillow to the San Francisco Bay region and a 22-inch line built jointly by the Pacific Gas & Electric Co. and the Standard Oil Co. The natural gas lines extending southward from Kettleman Hills are the Southern California Gas Co.'s 20-inch line from the North Dome to Los Angeles and the Southern Fuel Co.'s 26-inch transmission line which terminates at Long Beach. The Pacific Gas & Electric Co.'s Buttonwillow-San Francisco line was originally undertaken to move natural gas from the Buttonwillow gas field to the San Francisco Bay region but was routed via Kettleman Hills, which the Milham Exploration Co. subsequently proved highly productive. The Milham interests have not yet been able to make commercial deliveries of natural gas to the Pacific Gas & Electric Co. due to curtailment but has been able to fulfill its contractual obligations by making deliveries of natural gas at Kettleman Hills.

GEOLOGICAL DATA

The Kettleman Hills are a continuation to the south of the Coalinga anticline, the structure consisting of three anticlines lying en echelon. The North and Middle Domes have practically perfect closure but the South Dome is open at the southern end and its potentialities are therefore conjectural. Several tests have been drilled in the South Dome and, while commercial production has not been developed up to the present, this dome still has possibilities. Many believe that the South Dome of Kettleman Hills, due to the lack of closure on the south end, is in reality the northern end of the Lost Hills Field. This opinion has been quite general and is responsible for wildcat operations along the line of the axis northwest of Lost Hills between this field and the South Dome of Kettleman Hills. Production in the North Dome is at present coming from the Temblor formation, sometimes designated as Vaqueros, but those in close touch with the situation at Kettleman Hills and North Belridge anticipate the ultimate development of production below present productive measures at Kettleman Hills.

The Etchegoin formation, lower Pliocene, is exposed at the surface in the North Dome, although a narrow rim of Tulare, upper Pliocene, is exposed around the edges of the hills. Several thousand feet of strata, chiefly Etchegoin, but possibly including some Santa Margarita, upper Miocene, must be penetrated before the so-called brown shale (Monterey) middle Miocene, which immediately overlies the oil zone, is reached, the thickness at the top of the structure being about 4,900 feet. These strata comprise a wide variation of materials consisting of clay, shale and gravel, for the most part slightly consolidated but containing some very hard sandstones as depth is reached. Some of these sandstones have physical characteristics very similar to some of those in the oil zone below. A distinctive feature of the lower Etchegoin is the presence of an abundance of carbonaceous material and leaves, particularly in the sand strata. The contact between the Etchegoin and the underlying brown shale is probably an eroded surface, although some of the apparent unevenness indicated in well logs undoubtedly can be attributed to faulty determinations of contacts because the

(Continued on Next Page)

KETTLEMAN HILLS "WONDER FIELD"

① Kettleman's Hard Brown Shale was not too tough for the Baker Hydraulic Expansion WALL SCRAPER... used to ream a 12¼" hole out to 19" in a successful attempt to straighten well bore.

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- When you buy BAKER TOOLS you benefit by "Carl" Baker's intimate knowledge of every field problem run into by every operator in Kettleman Hills... you benefit by the experience of the Operators who put Kettleman Hills on the Oil Country map.

⑤ The successful landing and cementing of numerous record-breaking casing strings, proved the strength and dependability of BAKER CEMENT, GUIDING, FLOATING AND CEMENTING EQUIPMENT

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METROPOLITAN AND EXPORT FACILITIES brought the BAKER FACTORY AND GENERAL OFFICES TO LOS ANGELES in 1922

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SERVICE ON NEW FIELDS

Kettleman Hills, Fresno, Kings and Kern Counties, California

(Continued from Preceding Page)

difference in appearance between the brown shale and the so-called caving blue shales that ordinarily constitute the lowermost Etchegoin is not always distinctive.

A high-head, very salty water is found at an average depth of about 240 feet below the top of the brown shale. This water frequently causes a great deal of trouble in drilling wells and in general it increases in volume and head from northwest to southeast. The shut-off point is in brown shale about 30 feet above the top of the Temblor sands in the average. The procedure in early wells was to core for the top of the sand and then plug back and cement the water string on a bridge. Fortunately, however, in August, 1929, a bentonite marker was found so that it is no longer necessary to core the Temblor before setting pipe. This marker consists of a seam of clay which is a light bluish gray when wet and very light gray, almost white, when dry. The bentonite is very easily recognized in a core and sometimes in the ditch. It is a pure clay with hydraulic properties and is believed to be of volcanic origin or a derivative of volcanic ash. The seam is about 18 inches thick and is found over the entire field, the interval between it and the top of the Temblor ranging from slightly less than 50 feet in the extreme northwest to about 80 feet in the extreme southeast with, of course, greater apparent intervals on the flanks. The ordinary procedure now is to core for the bentonite and then drill 20 to 30 feet before cementing the water string. In this way the operator is practically sure that the shoe will be very near the sand and yet there will be little or no trouble with gas during the bailing test for water shut-off. There is at least one other streak of material similar to the bentonite marker above it in the bottom 200 feet of brown shale.

The Temblor oil and gas zone consists largely of hard sandstone with occasional very hard strata or reefs caused by cementing of the sandstone by lime from fossil shells. The sandstone, which varies in texture from very fine to fairly coarse, is divided into many strata of shale, which are usually thin and make up only a small percentage of the whole. One series of tests showed that the upper 800 feet of the oil and gas zone is about 80 per cent sand, and the average porosity, including the shale, is 10.22 per cent. These data are probably fairly representative of the entire Temblor, at least down to the Whepley shale. The oil and gas zone in the North Dome is generally recognized as being divided into five parts by shales or shaley intervals known in the field as the 300-foot shale, 600-foot shale, 800-foot shale and 1,000-foot shale. The first and fourth of these are more frequently referred to as the upper variegated and lower variegated shales, respectively. These so-called shales are usually groups of thin strata in which shales and sandy shales predominate. This is particularly true of the variegated shales, which were so named because of the characteristic purple, red and green coloring of the strata. For ease of reference, the divisions of the oil and gas zone will hereafter be called the first, second, third, fourth and fifth horizons.

The first horizon, which is approximately 300 feet thick, consists largely of fine, silty, gray sands with a few streaks of gray shale. It contains gas and small amounts of light oil and water. At no location within its productive limits has the amount of oil found in it been large. That is contains some water, even on top of the structure, has been shown by the fact that all wells in which it has been open to production have produced 30 to 90 bbls. of water daily with the gas and oil, while the production has been practically clean in wells in which it has been excluded from production. The area within which this horizon is productive does not extend to the edges of the field.

The second horizon is about 275 feet thick, and the physical characteristics of the strata are about the same as those of the first horizon. The second horizon also contains gas with a small amount of light oil on top of the structure, but if it is contributing to any considerable extent to the production of certain wells near the edge of the field it must contain largely dark oil at these locations. In the third horizon, which is about 175 feet thick, the sand strata are generally medium-grained, clean and porous. The fluid content of this interval at the top of the structure is also gas with a small amount of light oil, but dark oil with a comparatively small amount of gas probably fills the flanks to an increased degree.

The fourth and fifth horizons constitute what is usually regarded as the true black oil zone, the former being about 210 feet thick and the latter about 345 to 425 feet thick. The texture of the strata ranges from silty sands with thin streaks of sandy shale to coarse sands, more of the coarse sands occurring in the lower interval. Both horizons contain dark oil with a substantially increased amount of gas far up the flanks.

DEVELOPMENT

Discovery of field.

The Kettleman North Dome Field was proven commercially productive by the Milham Exploration Co. late in 1928. The discovery well, No. 1 Elliott, located in Section 2-22-17, was started March 21, 1927, and officially finished November 7, 1928, flowing 3,650 bbls. of clean 60 gravity oil. Mechanical trouble developed some time previous to completion and the well blew in out of control on October 5, 1928, while drill pipe was being run in to clean out the hole. The well flowed out of control until October 25, 1928, when a partial control was obtained. The well was brought under complete control November 7, 1928, and was subsequently shut in by the Kettleman North Dome Association in order to eliminate the waste of natural gas. No. 1 Elliott was drilled to 7,236 feet, at which depth a string of drill pipe was lost. This was sidetracked to 6,317 feet, where a string of 6⅝-inch was landed and cemented and the hole then redrilled to 7,108 feet.

The possibilities of developing commercial production in the Kettleman Hills area was recognized many years ago and, while several wildcats were drilled in the Hills previous to the initiation of work by the Milham interests, none of these tests was drilled deep enough to pick up the pay. As a matter of fact, the earliest tests were abandoned around the 1,000-foot level. This pioneer work is recorded in Bulletin No. 19 of the California State Mining Bureau published in November, 1900, and Bulletin No. 398 of the U. S. Geological Survey published in 1910. Included in these early tests were the Esperanza Oil Co.'s wells Nos. 1 and 2 in Section 14-22-17, abandoned at 1,100 feet and 840 feet, respectively; Florence Oil Co.'s two tests in Section 15-22-17, one abandoned at 745 feet and the other at 720 feet; Gibbs Oil Co.'s well No. 1 in Section 28-21-17, abandoned at 508 feet; Iowa Oil Co.'s well No. 1 in Section 4-22-17, abandoned at 1,000 feet; Oceanic Oil Co.'s test in Section 1-22-17, abandoned at 950 feet; Stanislaus Oil Co.'s wildcat in Section 4-22-17, abandoned at 1,000 feet; and the Stockton Oil Co.'s well No. 1 in Section 31-22-18, abandoned at 670 feet.

In 1908 the Coalinga Lakeview Oil Co. drilled a 1,290-foot duster in Section 26-21-17, and in 1910 the Coalinga Kettleman Oil Co. started a hole in Section 2-22-17, which was subsequently abandoned as a dud in 1913 at 4,810 feet. The Standard Oil Co. started a test in Section 34-24-19 in May, 1919, but abandoned work at 6,602 feet in January, 1922. If this well had been drilled in the North Dome instead of the Middle Dome, the petroleum history of California might possibly have been entirely changed. Other tests drilled in the Kettleman Hills included the Baird Oil Co.'s test in Section 24-22-18, drilled in 1910 to 3,502 feet; Medallion Oil Co.'s well No. 1 in Section 20-22-18, a cable tool job, started in 1910 and abandoned in 1915 at 4,160 feet; California Counties' well No. 1 in Section 4-24-19, drilled to 4,012 feet in 1911 and abandoned in 1913; and the Crescent Petroleum's well No. 1 in Section 2-25-19, drilled with cable tools to 3,501 feet and abandoned in 1918.

Successful deep drilling in other fields revived interest in the Kettleman Hills area along about 1923 and several additional tests were drilled both in the North and Middle Domes before completion of the Milham Exploration Co.'s discovery well in November, 1928. These included the General Petroleum's No. 1 Ochaner in Section 28-22-18, abandoned because of mechanical trouble at 6,435 feet in 1926; Marland's No. 1 Elliott, in Section 12-22-17, abandoned because of mechanical trouble at 5,379 feet in 1926; South Dome Oil Co.'s No. 1 Smith in Section 35-24-19, abandoned at 3,112 feet; Chanslor-Canfield Midway Oil Co.'s well No. 1 in Section 17-24-19, abandoned because of mechanical trouble at 5,010 feet in 1927; General Petroleum's No. 1 Kettleman in Section 4-24-19, junked at 3,800 feet and abandoned in 1928; and the Superior's No. 1 Hansen in Section 26-21-17, abandoned at 4,600 feet in 1927. In the meantime, the Bolsa Chica Oil Co. got some small production, 25 bbls. per day, in the Jacalitos-Etchegoin formation at 2,065 feet, but this well, No. 1 Downing, located in Section 30-23-19, was not commercially productive. The General Petroleum subsequently tested out this zone in No. 1 Burbank, but the well was ultimately abandoned at 3,104 feet in 1928 after producing about 2,750 bbls. of heavy 16 gravity oil. The General Petroleum started a second test on the Ochsner lease in April, 1927, and completed it as a commercial producer in April, 1929, several months subsequent to completion of the Milham's discovery well.

(To Be Continued in The Oil and Gas Journal of December 8, 1932)

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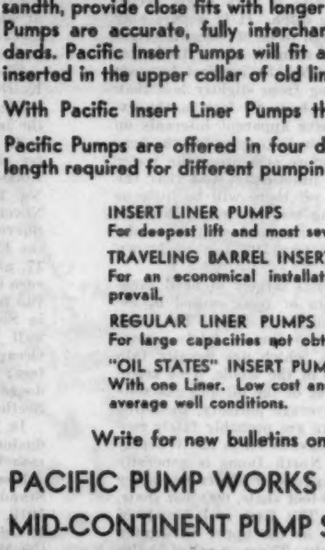

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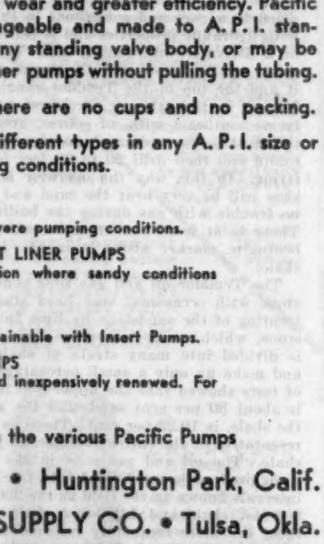


Most modern machinery, the best of material and workmanship goes into the manufacture of Pacific Pumps.

PACIFIC LINER PUMPS
"PACIFIC PRECISION MEANS A PERFECT PUMP"

Insert Liner
Pump illustrated

Viscosity Blending and Dilution Charts for Use in Compounding Lubricants

Under the direction of C. M. Larson, supervising engineer of the Sinclair Refining Co., the accompanying Viscosity Blending and Dilution Chart was prepared using the viscosity temperature chart A.S.T.M. tentative standard D-341-32 T. The chart is of interest to refiners who are concerned with problems of dilution as well as automobile manufacturers, many of whom for a number of years have recommended the cutting back of the heavier motor oils and transmission lubricants with kerosene or lighter oils for low temperature operation.

The chart, as explained by Mr. Larson, is used in the following manner:

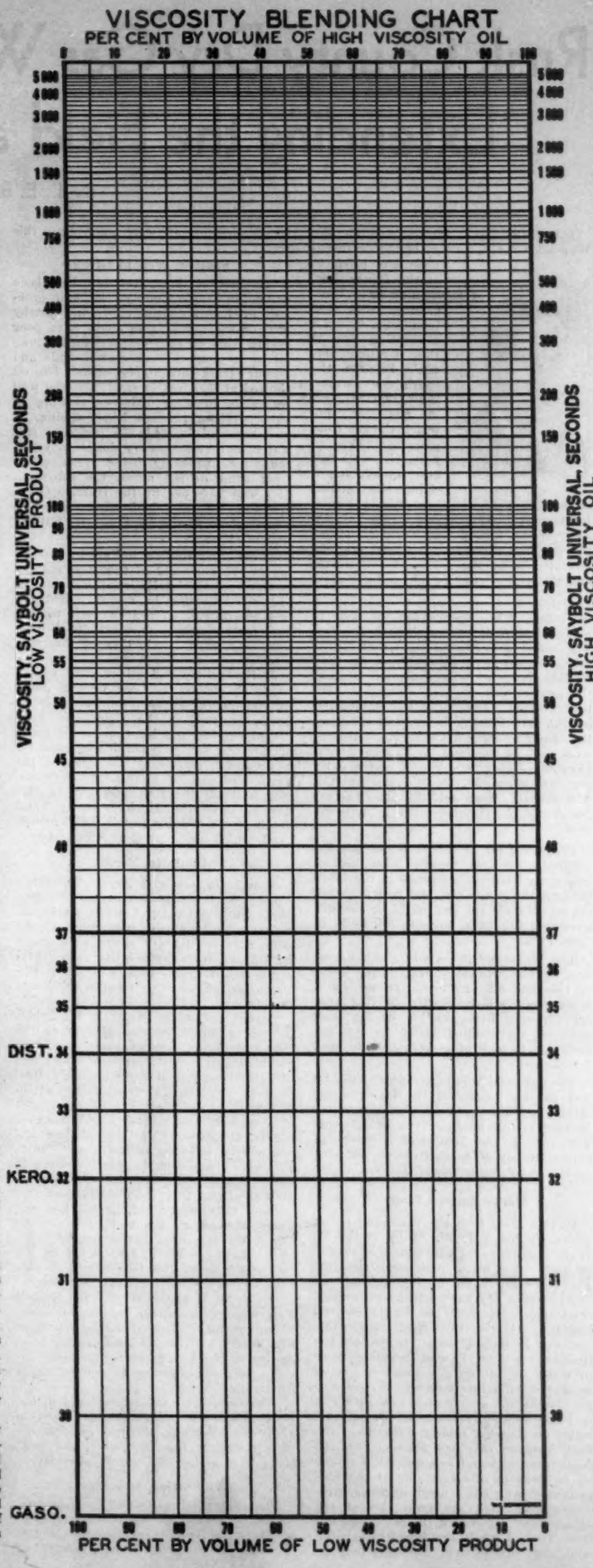
Quoting from the A.S.T.M. report of Committee D-2, 1932, Page 261:

". . . this viscosity-temperature chart furnishes a convenient means for estimating the viscosity at a given temperature of blends of petroleum liquids, provided viscosities of the component liquids at the given temperature are known. . . . Plot the known viscosities of the two components on the proper lines at points corresponding to the values on the viscosity scale, and draw a straight line through them. Points on this line show viscosities at the given temperature of blends of the particular components, depending upon the proportion of the light and heavy component.

"Example: As an example, estimate the viscosity of a blend of 15 per cent of an oil having a viscosity of 38 seconds, Saybolt universal at 100° F. and 85 per cent of an oil having a viscosity of 153 seconds, Saybolt universal at 100° F. . . . a straight line (a straight edge being sufficient for the purpose) between the 38 seconds Saybolt universal point (left) and the 153 seconds Saybolt universal point (right) crosses the 85 per cent line (of the heavy component) and the 15 per cent line (of the light component) at a value corresponding to 105 seconds. Thus the estimated viscosity of the blend is 105 seconds, Saybolt universal at 100° F." Note: "The experimental value was 108 seconds."

In case one of the components is kerosene, plot the corresponding point (left) and the viscosity point of the heavy component (right). Points on the straight line between these two points show viscosities of blends of kerosene and oil whether motor or transmission at the same temperature as the components.

Dilution: Knowing the original motor oil viscosity, the percentage of dilution can be found by a line between the motor oil viscosity (right) and the fuel used (left). The intersection of this line with the viscosity line of the used oil shows the percentage of dilution.



Increasing Utilization of Fuel Oil Fractions

(Continued from Page 27)

sation, complete mixing with an adequate supply of combustion air—both primary and secondary—a heated refractory lining, and positive control of draft conditions. To obtain the complete utilization of the advantages of oil heating, efficient recovery of heat generated, prevention of odors and noise, and freedom from mechanical difficulties must, obviously, be requisites of the utmost importance. Recent developments along these lines have been made, and should be vigorously followed.

When we consider that there are 775,000 domestic burner installations which cost at least $200,000,000, we readily appreciate the fact that the oil industry has an obligation to produce the necessary oil in such a manner as to enable this investment to carry through its normal life in competition with coal and gas. However, the oil burner industry, likewise, has a responsibility to design its equipment to operate on the oils available over a period of time at competitive values. It appears to us to be a similar situation to the one that exists between the oil industry and the automobile industry in connection with high compression engines. The closest co-operation is required to permit improvements in engine design and gasoline at a mutually economic and orderly rate. With the oil burner industry, the problem is somewhat more complicated by the long life of an oil burner—making radical improvements the subject of the closest co-operation between the two industries, highly important if economical development is to be secured.

The furnace oil demand is an important part of the oil industry's outlets, and is steadily increasing its position. We should, as an industry, attempt to see that it is developed on economic grounds from the standpoint of the consumer, the burner manufacturers, and the oil refiner.

OIL COMMITTEE TO WASHINGTON

A meeting of the Oil States Advisory Committee has been called for December 1 at Washington. Col. Cicero I. Murray, executive director and attorney for the group, has announced. The committee plans to adopt its legislative program, which it hopes to place before the short session of Congress.

Bolivia to Chile Line Considered at Santiago

The Chilean cabinet, according to a Santiago cable to the New York Times, is reported considering a petition of the Compania Petrolifera Oriental, controlling oil fields in Bolivia, for the construction of a 150-mile pipe line to the coast across Chilean territory.

Ricardo Larrain, an engineer, representing the Bolivian group, explained that the concession would be for 55 years, after which the property would pass into the hands of the State.

The line would be 8 and 12-inch and carry oil to one of the northern Chilean ports. The concession would involve the expenditure of about $500,000 within six months after commencement, complete plans to be furnished within six months. The capital to be invested, according to the proposal, would be more than $5,000,000.

The government insisted on a clause prohibiting the transfer of the concession. The northern provinces believe the works would save regions badly hit by the nitrate soda crisis. The newspapers favor the project, but argue there is danger in delivering an oil monopoly to foreign groups.

Dr. Erasmus Haworth Dies; Dean of Kansas Geology

WICHITA, Kans., Nov. 21.—Dr. Erasmus Haworth, 77, former dean of the school of geology at the University of Kansas, and for many years state geologist, died here Friday night.

He was born on a farm near Indianola, Iowa, April 17, 1855. He received his bachelor of science degree from Kansas University in 1881 and his master's degree in 1884. At Johns Hopkins University he obtained his Ph.D. degree in 1888. From there he went to his alma mater as a professor in geology and mineralogy. He resigned in 1920. He had given much to the school. Haworth Hall, the geology and mineralogy school, was named for him.

Doctor Haworth was author of many geological works. He organized the Kansas State Geological Survey in 1894 and was connected with the U. S. Geological Survey for years devoting much time to economic geology. He was a fellow and life member of the Geology Society of America, a life member of the Kansas Academy of Science.

Rusk County Dry Gas Wells Are Turning to Oil; Extending the Field a Mile Farther South

By L. E. BREDBERG

DALLAS, Tex., Nov. 21.—While the Womack Oil Co., owners of the southernmost gas producer of the Joiner area, southern Rusk County, was contemplating laying a connecting line to the United Gas Co.'s line to the south and marketing 1,000,000 feet of gas per day which the gas company contracted to take, the well had been undergoing a change since drilled in last May. It was then estimated good for around 60,000,000 feet of dry gas per day. When opened this week it showed the gas had decreased, but that oil had migrated from the sands to the north, and the well is now an oil producer also.

A test is to be made to establish a potential. When opened for one hour it made 12 bbls. of oil, but it is believed it will make far more oil than that. However, the per well allowable being only 40 bbls. daily, when a connection is made the owners will be able to market only that amount daily regardless of its potential. The Humble is the only company that has gathering lines in this southernmost part of the field, and as that company takes only 60 per cent of the daily per well allowable, the Womack Oil Co. will probably find only 24 bbls. market per day if the Humble connects with the well.

Producing oil in this well extends the oil-producing area over a mile, the oil migrating from the oil sands to the south through the gas sands, and will probably impregnate all six gas wells in the dry gas-producing area, making oil wells of them also.

The Womack Oil Co. will stake a location on the Hammett farm to the south of the new oil producer, and no doubt other tests will be drilled in this area for oil, very little drilling having been done on surrounding leases in the gas area due to lack of market and no need for the gas.

The gas sand was logged from 3,677-89 feet in this producer, the latter depth being the total depth in Woodbine sand. Making an oil producer out of the well now spreads the field over a length of approximately 40 miles from the extreme northeast to southernmost limits.

Marks Eastern Limits

In this same area the Stanolind Oil & Gas Co.'s No. 1 J. W. Ashby in the M. Walker Survey, on the east side of the gas-producing area, and approximately 1¼ miles northeast of the above well, has proved a dry hole, drilling salt water sand at 3,728 feet. It marks the eastern limits of this southernmost area. The company is drilling deeper to contact the Georgetown lime. It was considered sure to make an oil or gas producer, being located on the line between the oil and gas producing areas, and was rather a surprise, especially when it showed salt water on the east side of production, the first instance this has happened in the Joiner area, although salt water has shown up in wells on the east side of the Kilgore area, which is a much narrower producing area than the main part of the Joiner Field. However, the gas producing area tapers down to less breadth than the main part of the field, and this may be responsible for salt water showing in this test.

Shallow Well in Gregg

Another shallow producer has been drilled in Gregg County, the well probably producing seepage oil from a nearby well or wells, which no doubt have poor casing seats or split casing which allows oil to seep up through water sands and porous strata into higher sands. The oil showed at 660 feet in sand, and the well was shut down at 695 feet, flowing 32 bbls. per hour through 1-inch tubing. It was reported it made 15 per cent salt water, but this was no doubt in error, the water probably being fresh water from sand drilled above the oil sand. The well is owned by the Humble Oil & Refining Co., and is located on its A. Carter lease in the D. Ferguson Survey, east of Gladewater.

Three other shallow wells were producing to the northeast of this new shallow producer, and the Railroad Commission ordered them shut in, casing pulled and new casing run on nearby wells to prevent further migration of oil. An injunction may check production of this well also.

J. K. Wadley and others have temporarily abandoned their No. 1 W. S. Jones in the Dunn Survey, on the extreme northeast end of the field, and have moved derrick to a location to the north of this test which is considered good for a producer, extending the field to the north and east of Cranfill & Reynolds' No. 1 Rash, the first producer in this part of the district, Upshur County. Total depth of the Wadley test is 3,696 feet in sand, which was topped at 3,689 feet.

Limit to North

Simms Oil Co. and Frank Buttram's No. 14 W. R. Nicholson in the Marshall Mann Survey, Upshur County, marks the western limits of the north end of the field after testing salt water with showing of oil from 3,690-3,704 feet. Total depth is 3,705 feet. This is on the northwest side of the two companies' leases in this area.

Corbin and others' No. 1 A. H. Tubbs, located in the D. Sanches Survey on the east side of the Gregg County area, was abandoned at a total depth of 3,596 feet after logging top of sand at 3,570 feet. It went into the Georgetown lime at 3,592 feet.

Humphrey and others' No. 1 Branson in the D. Meredith on the northeastern side of the Lathrop area, Gregg County, was also abandoned. It was bottomed at 3,645 feet in shale after proving dry on drill stem test from 3,580-3,632 feet.

Shell Petroleum Corp. has farmed out more acreage on the west side of the Gregg County area, letting go 60 acres of its 120-acre W. S. Lacy tract in the Grisham Survey, near Gladewater. It also sold 100 acres of its R. H. Crim lease in the J. M. Morris Survey to the Russell Petroleum Corp. Shell retains an overriding royalty when it subleases these edge leases, and has let considerable acreage go to smaller operators for such consideration, not desiring to operate these leases itself.

There were 101 wells completed in the field this week, with activities holding above the 400 mark. Ninety-nine locations were staked in the field, while two locations were staked in wildcat territory.

Wildcatting Activities

The Sinclair Prairie Oil Co. has purchased between 8,800 and 9,000 acres centering in the George Neggins and Candler Surveys in eastern Wood County, 12 miles east of Quitman, and has spudded to drill a test on the John C. Saner farm in the latter survey. Andrew Erwin of Dallas holds a half interest in the block.

F. B. Parriott's No. 1 John G. Harvey in the Meredith H. Ussery Survey, Wood County, is drilling below 3,025 feet. Top of Pecan Gap chalk was reported as logged at 2,980 feet.

P. L. Meader's No. 1 T. C. Coleman in the W. G. Gibbard Survey, Kaufman County, on a block near the town of Elmo, is drilling below 3,020 feet.

Leon County

Shell Petroleum Corp. and others' No. 1 Phillips, in the E. H. Swayze Survey, Leon County, cored shale from 6,067-74 feet, after going out of sand from 6,061-67 feet, which contained no showings of oil or gas. Sand and broken shale was also logged from 5,983-91 feet, which proved of no interest in regard to carrying any showings of oil. The test has apparently lost any possible threat of making a producer, and will not be followed as closely as it has been in the past. It is located on a large block which was taken on the basis of geological data and core drill work completed on it before the company purchased a half interest in the block from the Penn Oil Co. and J. R. Black of Dallas.

Hughes, Reiter and others' No. 1 Burleson, in the W. Carter Survey, Freestone County, has been abandoned at a total depth of 3,727 feet after coring top of water sand at 3,720 feet.

W. H. Roeser and others' No. 1 Hanke, an interesting wildcat in Anderson County, in the Anderson County School Lands, is drilling below 5,165 feet after red beds were reported to have been topped at 5,103 feet. Contract depth is 5,300 feet. Elevation is 449 feet. Top of Pecan Gap chalk was logged at 3,097 feet and Austin chalk from 4,168-4,444 feet. Woodbine sand was topped at 3,720 feet.

Kaufman County

T. L. Wynn and others are drilling on their No. 1 J. A. Nash, in the Irvins Survey, Kaufman County. This is a new location for this county. Witherspoon and others have started up on their No. 1 S. Pannill in the A. Chirons Survey after a lengthy shutdown. Hard, dry sand was cored from 2,380-2,405 feet, showing no oil or gas.

John Hoosier and associates have taken a block of approximately 2,000 acres and are seeking 500 more, northeast of the Meyers block near Brownsboro in Henderson County, in the vicinity of the test now shut down with casing cemented. Hoosier's block is located in the D. Parker, W. Parker, W. Anderson, James Campbell, William Simpson and C. M. Deason Surveys. He has agreed to drill a well on the block.

Jerome McLester has made a 50-50 drilling contract with B. Williams to drill a test on the east 80 acres of the K. E. and J. N. Browning 161-acre tract in the southwest corner of the I. Williams Survey, approximately 1¼ miles northeast of Meyer's No. 1 Olson, which is located in the George Wilson Survey.

Leased by Magnolia

The Magnolia Petroleum Co. has leased approximately 16,000 acres in Franklin and extending over into Hopkins and Titus Counties, including 4,000 acres in the vicinity of Harper's No. 1 fee in the W. M. Dawson Survey in Franklin County. Others have been taking acreage near this block.

The 7,500-acre block assembled by J. W. Barton around Maydelle in Cherokee County, which was turned to B. A. LaSalle, is now being drilled by the Loring Oil Co. 1 mile southwest of the town on the Swearingen farm in the Oliver Lund Survey. It is drilling below 2,690 feet.

Acreage Ratio

The 25 major producing companies in the field have brought down their well per acreage ratio to one well to each 15.22 acres; all others have an average of one well to every 9.47 acres.

Distribution Report

The distribution report from the field for the period ending November 17 shows main pipe lines carrying an average of 322,435 bbls. per day from the district, with 29,180 bbls. per day going to local refineries, and tank car shipments having gained to 9,872 bbls. per day. This is no doubt only part of the tank car shipments as not all shipments have been reported by the railroads serving the field.

There are 17 refineries operating in the district, six others standing shut down at this writing, while five others are under construction.

COMPLETIONS IN EAST TEXAS

North Gregg County

Amerada Petroleum Corp.'s No. 7 Burnside, top sand 3,528 feet, initial production 19 bbls. in one-quarter hour through three-quarter inch tubing choke, total depth 3,557 feet; No. 8 Killingsworth, top sand 3,601 feet, initial production 93 bbls. per hour through three-quarter inch tubing choke, total depth 3,629 feet. Atlantic Oil Production Co.'s No. 5 Castleberry, top sand 3,612 feet, initial production 64 bbls. per hour through 1¼-inch and 1½-inch open tubing, total depth 3,660 feet; No. 30 Moore, top sand 3,509 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,534 feet; No. 34 Moore, top sand 3,505 feet, initial production 64 bbls. per hour through open tapered tubing, total depth 3,529 feet. Atlantic and Stanolind Oil & Gas Co.'s No. 7 Fishburn, top sand 3,480 feet, initial production 64 bbls. per hour through tapered tubing, total depth 3,520 feet.

Corbin and others' No. 1 A. H. Tubbs, top sand 3,570 feet, top Georgetown lime 3,592 feet, dry and abandoned, total depth 3,596 feet (D. Sanches Survey); No. 2 Tubbs, location abandoned. Dearing & McBride's No. 4 Elmira Chapel, top sand 3,586 feet, initial production 40 bbls. in 51 minutes through three-quarter inch tubing choke, total depth 3,615 feet. Groveman & Dorian's No. 1 State, top sand 3,423 feet, initial production 32 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,449 feet. Gulf Production Co.'s No. 22 M. O. Sheppard, top sand 3,488 feet, initial production 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,514 feet.

Humble Oil & Refining Co.'s No. 9-X A. Carter, top sand 660 feet, initial production 32 bbls. per hour through 1-inch tubing choke, total depth 695 feet, 15 per cent fresh water (D. Ferguson Survey); No. 12 T. D. Harris, top sand 3,537 feet, initial production 19 bbls. in one-quarter hour through three-quarter inch tubing choke, total depth 3,588 feet; No. 9-A D. Johnson, top sand 3,580 feet, initial production 101 bbls. per hour through three-quarter inch tubing choke, total depth 3,600 feet; No. 7 Mittie Killingsworth, top sand 3,600 feet, initial production 61 bbls. per hour through three-quarter inch tubing choke, total depth 3,641 feet; No. 8 Killingsworth, top sand 3,564 feet, initial production 68 bbls. per hour through three-quarter inch tubing choke, total depth 3,635 feet.

S. H. Killingsworth's No. 1 State, top

sand 3,460 feet, initial production 30 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,503 feet. Lester & Duffield's No. 3 J. Moore, top sand 3,557 feet, initial production 40 bbls. in one-quarter hour through open 2-inch tubing, total depth 3,579 feet. Magnolia Petroleum Co.'s No. 5 F. M. Fonville, top sand 3,551 feet, initial production 202 bbls. per hour through 2½-inch open tubing, total depth 3,556 feet; No. 8 W. E. Jones, top sand 3,672 feet, initial production 104 bbls. per hour through open 2½-inch tubing, total depth 3,686 feet. Pelphrey Brothers and others' No. 1 Wheeler, top sand 3,587 feet, initial production 75 bbls. per hour through three-quarter inch tubing choke, total depth 3,612 feet. Pennsylvania Oil & Fuel Co.'s No. 2 T. R. Harris, top Georgetown lime 3,514 feet, temporarily abandoned, total depth 3,515 feet. Prince Brothers' No. 6 Williams, top sand 3,600 feet, initial production 84 bbls. per hour through three-quarter inch tubing choke, total depth 3,640 feet. Rhoads Drilling Co.'s No. 1-C J. M. Christian, top sand 3,614 feet, initial production 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,640 feet.

Shell Petroleum Corp.'s No. 9 A. N. and V. King, top sand 3,505 feet, initial production 35 bbls. per hour through tapered tubing, total depth 3,590 feet; No. 20 J. Moore, top sand 3,538 feet, initial production 25 bbls. per hour through 2-inch tapered tubing, total depth 3,567 feet; No. 8 Slaton, top sand 3,580 feet, initial production 20 bbls. in one-half hour through tapered tubing, total depth 3,670 feet; No. 8 Stinchcomb, top sand 3,459 feet, initial production 22½ bbls. per hour through tapered tubing, total depth 3,496 feet. Sinclair Prairie Oil Co.'s No. 10 J. R. Williams, top sand 3,485 feet, initial production 40 bbls. in one-quarter hour through open 2½-inch tubing, total depth 3,541 feet. Sun Oil Co.'s No. 5 Mose Thomas, top sand 3,488 feet, initial production 31 bbls. per hour through open tapered tubing, total depth 3,566 feet. The Texas Company's No. 11 T. W. Lee, top sand 3,528 feet, initial production 110 bbls. per hour through open 2-inch tubing, total depth 3,564 feet. Yount Lee Oil Co.'s No. 4 J. Snoddy, top sand 3,529 feet, initial production 73 bbls. per hour through eleven-sixteenths inch tubing choke, total depth 3,549 feet.

South Gregg County

Atlantic Oil Production Co.'s No. 6 W. Smith, top sand 3,572 feet, initial production 64 bbls. per hour through open tapered tubing, total depth 3,593 feet. Blue Star Oil Co.'s No. 6-F Sabine River, top sand 3,516 feet, initial production 60 bbls. per hour through three-quarter inch tubing choke, total depth 3,538 feet (Tract No. 6); No. 6-K Sabine River (Tract No. 6), top sand 3,507 feet, initial production 60 bbls. per hour through three-quarter inch tubing choke, total depth 3,534 feet; No. 7-G Sabine River (Tract No. 7), top sand 3,480 feet, initial production 80 bbls. per hour through three-quarter inch tubing choke, total depth 3,500 feet. Sam Raitman's No. 2 A. Z. Jeffrey, top sand 3,770 feet, initial production 20 bbls. in five minutes through 1¼-inch tubing choke, total depth 3,772 feet. F. E. Flannery's No. 2 M. T. Cole, location abandoned. Gulf Production Co.'s No. 20 A. Spear, top sand 3,598 feet, initial production 75 bbls. per hour through three-quarter inch tubing choke, total depth 3,609 feet.

Gregg County

Humble Oil & Refining Co.'s No. 22-B S. S. Laird, top sand 3,551 feet, initial production 55 bbls. per hour through three-quarters inch tubing choke, total depth 3,630 feet. Magnolia Petroleum Co.'s No. 6 John Radford, top sand 3,695 feet, initial production 112 bbls. per hour through 1-inch tubing choke, total depth 3,695 feet. Harry Noss' No. 5 F. Marshall, top sand 3,545 feet, initial production 35 bbls. per hour through open tubing, total depth 3,585 feet. E. J. Raddatz' No. 5 Sabine River (Tract No. 8), top sand 3,425 feet, initial production 200 bbls. per hour through open casing and tubing, total depth 3,480 feet. Republic Production Co.'s No. 3 Watkins, top sand 3,575 feet, initial production 65 bbls. per hour through three-quarters inch tubing choke, total depth 3,585 feet. Rhoads Drilling Co.'s No. 11 Sabine River, top sand 3,538 feet, initial production 30 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,555 feet (Tract No. 4); No. 6 Sabine River, top sand 3,525 feet, initial production 30 bbls. in 30 minutes through 1-inch tubing choke, total depth 3,534 feet. Russell Petroleum Co.'s No. 3 M. T. Cole, location abandoned. Ruston Drilling Co.'s No. 3 Sabine River, top sand 3,555 feet, initial production 45 bbls. per hour through three-quarters inch tubing choke, total depth 3,560 feet.

Shell Petroleum Corp.'s No. 3 D. Carr, top sand 3,423 feet, initial production 20 bbls. in 30 minutes through open tubing, total depth 3,449 feet; No. 5-A J. A. Elder, top sand 3,540 feet, initial production 22 bbls. in 30 minutes through open tubing, total depth 3,604 feet; No. 22 J. B. Watson, top sand 3,573 feet, initial production 30 bbls. in 30 minutes through tapered tubing, total depth 3,664 feet; No. 6 A. W. Willoughby, top sand 3,532 feet, initial production 21 bbls. in 30 minutes through tapered tubing, total depth 3,590 feet; No. 8 E. W. Willoughby, top sand 3,540 feet, initial production 22 bbls. in 30 minutes through open tubing, total depth 3,596 feet. Sinclair Prairie Oil Co.'s No. 21-B A. A. King, top sand 3,470 feet, initial production 40 bbls. in 15 minutes through open tubing, total depth 3,510 feet; No. 22-B A. A. King, top sand 3,468 feet, initial production 35 bbls. in 15 minutes through open tubing, total depth 3,510 feet; No. 23-B A. A. King, top sand 3,465 feet, initial production 40 bbls. in 15 minutes through open tubing, total depth 3,488 feet; No. 25-B A. A. King, top sand 3,478 feet, initial production 40 bbls. in 15 minutes through open tubing, total depth 3,508 feet; No. 12-B A. A. King, top sand 3,428 feet, initial production 37 bbls. in 15 minutes through open tubing, total depth 3,466 feet; No. 13-B A. A. King, top sand 3,433 feet, initial production 35 bbls. in 15 minutes through open tubing, total depth 3,470 feet. Liner, Inc.'s No. 2-E Clayborn, top sand 3,679 feet, initial production 90 bbls. per hour through open tubing, total depth 3,681 feet. Standard Oil Co. of Kansas' No. 4 J. A. Knowles, top sand 3,584 feet, initial production 45 bbls. in 15 minutes through open tubing, total depth 3,607 feet. Steen Drilling Co.'s No. 4 W. D. Lacy, top sand 3,572 feet, initial production 57 bbls. in 30 minutes through three-quarters inch tubing choke, total depth 3,577 feet. The Texas Company's No. 6 R. B. Wells, top sand 3,660 feet, initial production 92 bbls. per hour through open tubing, total depth 3,683 feet. Tidal Oil Co.'s No. 15 M. B. Hughey, top sand 3,473 feet, initial production 7 bbls. in 5 minutes through open tubing, total depth 3,530 feet.

North Rusk County

Darby Petroleum Co.'s No. 9 C. O. Christian, location abandoned. Gulf Production Co.'s No. 7 Sexton, top sand 3,633 feet, initial production 45 bbls. per hour through three-quarters inch tubing choke, total depth 3,713 feet. L. Hickman and others' No. 2 Hindman, top sand 3,636 feet, initial production 110 bbls. in 10 minutes through open tubing, total depth 3,642 feet. Houston Oil Co.'s No. 4 D. M. Peterson, top sand 3,619 feet, initial production 125 bbls. per hour through open tubing, total depth 3,699 feet. Humble Oil & Refining Co.'s No. 4 D. Ladd, top sand 3,668 feet, initial production 90 bbls. per hour through three-quarters inch tubing choke, total depth 3,714 feet; No. 23-B S. S. Laird, top sand 3,531 feet, initial production 27 bbls. per hour through 1-inch tubing choke, total depth 3,621 feet; No. 6 M. E. Minor, top sand 3,742 feet, initial production 35 bbls. per hour through open tubing, total depth 3,744 feet; No. 5-C H. Sexton, top sand 3,728 feet, initial production 93 bbls. per hour through three-quarters inch tubing choke, total depth 3,748 feet. Shasta Oil Co.'s No. 3 Alexandria, location abandoned. Tidal Oil Co.'s No. 7 Jack Bean, top sand 3,533 feet, initial production 8 bbls. in 5 minutes through open tubing, total depth 3,575 feet.

South Rusk County

Ajo Oil Co.'s No. 2-A Joe Lee, top sand 3,790 feet, initial production 75 bbls. per hour through three-quarters inch tubing choke, total depth 3,795 feet. American Liberty Oil Co.'s No. 16 Ida L. Kinney, top sand 3,578 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,630 feet; No. 4-C Pinkston, top sand 3,592 feet, initial production 30 bbls. per hour through open tubing, total depth 3,667 feet. Jim Cloud's No. 7 W. F. Neal, top sand 3,801 feet, initial production 20 bbls. in 10 minutes through 1-inch tubing choke, total depth 3,804 feet. Dearing and son's No. 3 L. L. Jones, top sand 3,775 feet, initial production 60 bbls. in 30 minutes through 2-inch open tubing, total depth 3,800 feet.

Devonian Oil Co.'s No. 8 Milstead, top sand 3,677 feet, initial production 40 bbls. in 40 minutes through three-quarter inch tubing choke, total depth 3,748 feet. Falcon Oil Co.'s No. 5 T. O. Mason, top sand 3,632 feet, initial production 16 bbls. in one-quarter hour through 1-inch tubing choke, total depth 3,648 feet. Humble Oil & Refining Co.'s No. 21-A Kangerga, top sand 3,682 feet, initial production 31 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,716 feet; No. 14-A Plowman, top sand 3,688 feet, initial production 29 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,738 feet; No. 4 Walter Shaw, top sand 3,776 feet, initial production 31 bbls. in one-half hour through three-quarters inch tubing choke, total depth 3,780 feet; No. 13-A R. E. L. Silvey, top sand 3,689 feet, initial production 63 bbls. per hour through three-quarters inch tubing choke, total depth 3,764 feet; No. 11-B R. E. L. Silvey, top sand 3,604 feet, initial production 77 bbls. per hour through three-quarters inch tubing choke, total depth 3,700 feet; No. 12-B R. E. L. Silvey, top sand 3,590 feet, initial production 63 bbls. per hour through three-quarters inch tubing choke, total depth 3,683 feet; No. 7 J. E. B. Sneed, top sand 3,739 feet, initial production 90 bbls. per hour through three-quarters inch tubing choke, total depth 3,775 feet; No. 6 Mattie Wooster, top sand 3,690 feet, initial production 54 bbls. per hour through three-quarters inch tubing choke, total depth 3,746 feet; No. 5 Sue Hale, top sand 3,632 feet, initial production 40 bbls. in four hours pumping, total depth 3,758 feet.

Hunt Production Co.'s No. 6 Reed, top sand 3,587 feet, initial production 40 bbls. in one-half hour through 2-inch open tubing, total depth 3,712 feet. Mid-Kansas Oil & Gas Co.'s No. 12 H. C. and G. W. Burton, top sand 3,628 feet, initial production 88 bbls. per hour on 2-inch lead, total depth 3,667 feet; No. 4 Kangerga, top sand 3,602 feet, initial production 108 bbls. per hour on 2-inch lead, total depth 3,625 feet. Youndell Rogers' No. 4 Daisy Bradford, top sand 3,597 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,684 feet. Stroube-Wheelock and Collins' No. 5 Pinkston, top sand 3,644 feet, initial production 30 bbls. in one-half hour through one-half inch tubing choke, total depth 3,658 feet. Grady Vaughan's No. 3 Thrash, top sand 3,762 feet, initial production 90 bbls. per hour through open 2½-inch tubing, total depth 3,787 feet. Nat Sissman's No. 2 Wilson, top sand 3,732 feet, initial production 70 bbls. per hour through open 2½-inch tubing, total depth 3,776 feet.

Smith County

J. O. Allen's No. 1 fee, dry and abandoned, total depth 3,829 feet, top sand 3,823 feet, base 3,824 feet, top Pecan Gap 2,822 feet, base 3,192 feet, top Austin chalk 3,645 feet. Mid-Kansas Oil & Gas Co.'s No. 16 J. H. Sharp, top sand 3,661 feet, initial production 92 bbls. per hour on 2-inch lead, total depth 3,664 feet. Stewart Holding, Inc.'s No. 1 T. O. Wright, top sand 3,710 feet, initial production 75 bbls.in one-half hour through open 2-inch tubing, total depth 3,730 feet. The Texas Company's No. 9-A A. S. Jarvis, top sand 3,609 feet, initial production 70 bbls. per hour through open 2-inch tubing, total depth 3,621 feet.

Upshur County

Lewis Godlin's No. 2 L. T. Mackey, top sand 3,696 feet, initial production 25 bbls. per hour through open 2-inch tubing, total depth 3,704 feet. Magnolia Petroleum Co.'s No. 8 Hampton, top sand 3,554 feet, initial production 128 bbls. per hour through 2-inch tubing choke, total depth 3,676 feet. B. F. Phillips' No. 2 E. H. Brawley, top sand 3,694 feet, initial production 40 bbls. per hour through open 2-inch tubing, total depth 3,697 feet. Simms and Buttram's No. 14 W. R. Nicholson, top sand 3,681 feet, base 3,683 feet, dry and abandoned, total depth 3,705 feet, drill stem test 3,690-3,704 feet, open 10 minutes, 2,800 feet salt water, show of oil and gas (Marshall Mann Survey). Sun Oil Co.'s No. 10 J. Hargraves, top sand 3,732 feet, initial production 8 bbls. per hour through 1-inch, 1½-inch and 2-inch open tubing, total depth 3,736 feet.

East Central Texas Wildcats

Week Ending November 21

ANDERSON COUNTY

Company, well, farm name, section and block—	Remarks:
W. H. Rosier's No. 1 W. H. Henke, 48,115 varas S and 294 varas W of NE cor. of Blk. No. 12, Anderson County School Lands Sur.	Top Woodbine sand 4,771 ft.; T.D. 4,878 ft.
C. R. Willmuth et al's No. 1 N. B. Watson, 500 ft. from W line and 4,850 ft. from N of S line of survey in S½ of 129-ac. tract, M. Main Sur.	T.D. 1,538 ft.

ANGELINA COUNTY

Crosbie et al's No. 1 John C. Davis, 150 ft. from N of center of tract and survey, John H. Graham Sur.	S.D. 610 ft.
W. J. Chandler's No. 1 L. J. Dearman, 350 ft. from S and W lines of 20-ac. tract, J. T. Peavy Sur.	S.D. 1,223 ft.

BOWIE COUNTY

Roy Anderson's No. 1 Dykes, 2 miles W of Texarkana, M. Dykes Sur.	Set csg.; T.D. 2,870 ft.
Tom Bell et al's No. 1 C. M. Moss, 1,800 ft. from N line and 2,160 ft. from W line of 465-ac. tract and survey, O. D. Walton Sur.	Derrick.

CHEROKEE COUNTY

Barkley Tate et al's No. 1 H. E. Neal, 330 ft. from N and W lines of tract, J. M. Prosella Sur.	Derrick.
Bridges and Candler's No. 1 Berryman, center of Berryman tract, H. Kimble Sur.	S.D. 1,550 ft.
Davis et al's No. 2 Annie Kelly, 631 ft. W of No. 1, M. De Los Santos Coy Sur.	Derrick.

(Continued on Page 44)

WILDCAT COMPLETIONS

Hopkins County

Columbia Oil & Gas Co.'s No. 1 McCloud, top Pecan Gap 1,255 feet, top Austin chalk 2,860 feet, base 2,910 feet, dry and abandoned, total depth 3,540 feet.

COMPLETIONS IN VAN FIELD

Van Zandt County

Pure Oil Co.'s No. 8 W. F. Swain, initial production first 24-hour gauge after choked for proration 58 bbls., total depth 2,692 feet; No. 2 Sam Allen, initial production first 24-hour gauge after choked for proration 50 bbls., total depth 2,950 feet.

Large Gas Showing in Ector County Wildcat; Extension in Fisher County Lime District

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Nov. 21.—A large gas showing in an Ector County wildcat and 1-mile extension to the Fisher County lime producing area were the principal features in the West Texas district during the week.

L. C. Harrison and others' No. 1 Addis in Section 35, Block 43, Township 2s, T.&P. Survey, Ector County, 2 miles east of Weekly Oil Corp. and others' gasser, and 10 miles north and east of the Penn Pool, Ector County, encountered the first gas at 3,650-70 feet, picked up an increase at 3,793 feet and another at 3,820 feet, registering 6,500,000 feet of gas at the latter depth, and an oil showing from 3,846-53 feet.

The Weekly corporation well was completed for a 4,000,000-foot gas well at 4,305 feet, to which point it was plugged back after drilling to 4,375 feet. It may be on the eastern flank of the structure and the Addis well may prove to be located in the oil-producing area, opening the third pool for this county. Deeper drilling will prove whether oil in commercial quantities is to be found, or the well is to make only another gasser. The two wells are apparently connected. The former has an elevation of 2,934 feet, the latter 2,971 feet, proving the former to be running higher on structure according to correlations.

Fisher County

Southern Oil Corp.'s No. 1 Pardue in Section 202, Block 1, B.B.B.&C. Survey, is estimated good for 2,000 bbls. per day after flowing 300 bbls. in two hours from lime topped at 3,104-05 feet. Total depth is 3,105 feet. This well marks a 1-mile extension to the Fisher County lime area, and is 6,670 feet north of Cranfill & Reynolds' No. 1 George which is now drilling in 3-inch hole below 6,340 feet.

Crane-Upton Proration

The Railroad Commission has just issued new proration orders on Crane, Upton and Winkler County fields, as a result of a hearing held on these areas on November 2 at Fort Worth.

The Crane-Upton order fixes the allowables for all of this area, excepting Gulf Production Co.'s "inside" McIlroy properties, at 13,000 bbls. per day. It also limits the gas-oil ratio to not more than 750 feet of gas per barrel of oil on the "inside" McIlroy holdings.

Allowable of the Hendricks area was set at 27,000 bbls. per day with each well to contribute its proportionate part to the total based on relative potential. Acreage consideration was omitted in the new order.

The Scarborough area of north Winkler County no doubt came in for considerable recognition by the commission, the order on Winkler County apparently taking into consideration the "common purchaser" act in an effort to minimize difficulties operators in this area have previously experienced in obtaining outlet for their production.

Big Lake Field

The twelfth deep producer was recently added to the Big Lake Field, Reagan County. This well is Group No. 1 Oil Corp. and Continental Oil Co.'s No. 5-B University and when unloaded on November 7 at 8,483 feet tested 21.5 bbls. of oil per hour. Four days later it flowed 630 bbls., the next day 700 bbls. and has gained slowly since that time, pressure increasing also.

Big Lake Oil Co.'s No. 1-C University is now drilling below 9,300 feet. This test is scheduled to go to 12,000 feet.

WICHITA FALLS-RANGER

There have been 31 wells in the Breckenridge area of Stephens County successfully treated with acid, all of them responding to the treatment by an increase in production of oil and gas. Two of the most outstanding are Gulf Production Co.'s No. 1 Ward 14-C lease in T.&N.L. Survey No. 1,237, north Stephens County and Sinclair Prairie Oil Co.'s No. 6 Atkins in the NE Section 19, T.&N.L. Survey, approximately 7 miles east of Crystal Falls.

The former well was originally completed December 14, 1920, for an initial production of 1,100 bbls. per day from pay topped at 3,067 feet. Total depth is 3,110 feet. Production had declined to 6 bbls. of oil per day, no water. Gas has fallen off to 190,000 feet per day. It was treated with 750 gallons of acid with 170 bbls. top load, left standing 48 hours, then placed on the pump. It gauged 108 bbls. the first day, 72 bbls. the next, 47 bbls. the following and 50 bbls. the fourth day with an average of 3 bbls. of water per day. The gas about doubled in volume.

The Sinclair Prairie well was completed February 8, 1922, making 600 bbls. per day from pay topped at 3,186-3,218 feet. It had declined to 1 bbl. of oil per day and no water. It was treated with 1,000 gallons of acid solution with a top load of 180 bbls. The acid was dumped in the casing and allowed to stand for 48 hours. On November 11 it pumped 92 bbls. oil, November 12 pumped 81 bbls., November 13, 59 bbls., November 14, 86 bbls. and November 15, 161 bbls. showing a decided increase the last two days and a vast increase over the old production record of 1 bbl. per day. It is now pumping 190 bbls. per day.

There were 55 locations in the Ranger and Wichita Falls districts for the week, the largest number reported in any one week during the past two years.

Cook County

One of the most important strikes in the latter district during the week was Roeser-Pendleton, Inc. and Continental Oil Co.'s 1 mile extension to the northwest of the Cook Pool, Shackelford County. The well is No. 2-A Cook, and is in Section 112, E.T.R.R. Survey. It came in making around 2,750,000 feet of gas per day from sand logged at 1,137-40 feet. Closed in rock pressure is 350 pounds.

PANHANDLE DISTRICT

There were five locations in the Panhandle district this week with five completions reported.

A hearing will be held by the Railroad Commission on December 12, at which time rules will be considered governing the conservation of natural gas and the fixing of oil and gas ratio for all wells producing both products in the Panhandle district. This will be the first hearing since the enactment of the market demand bill, which is expected to have considerable effect in prorating gas wells in the Panhandle.

Wildcat Operations in West Texas

Week Ending November 21

BORDEN COUNTY

Company, well, farm name, section and block—	Remarks:
Westyde Investment Co.'s No. 1 Looney, 990 ft. from S and E, Sec. 15, Blk. 31, Twp. 4n. T.&P. Sur.	S.D. 3,340 ft.; T.L. 3,295 ft.

BREWSTER COUNTY

Brewster Oil Co.'s No. 1 fee, 2,640 ft. S and 2,598 ft. E of NW cor., Sec. 45, Blk. G-15, G.C.&S.F. Sur.	S.D. 1,935 ft.
E. L. Chapman's No. 1 Skinner, C SW SE Sec. 100, Blk. 2, G.C.&S.F. Sur.	S.D. 1,302 ft.
Joiner's No. 1 McIntire, 955 ft. from S and 2,399 ft. from E, Sec. 31, Blk. 252, W. J. Mitchell Sur.	S.D. 425 ft.
Trans-Pecos Oil & Gas Co.'s No. 1 Jones, 930 ft. from N and 2,500 ft. from E of Sec. 15, Blk. G-15, G.C.& S.F. Sur.	S.D. 2,900 ft.
Van McPhail's No. 1 McIntyre, SE cor. Sec. 59, Blk. 252, 7 miles south Alpine	S.D. 1,750 ft.

CONCHO COUNTY

Beasley et al's No. 1 Waring Estate, 400 ft. from N and E, Sec. 163, T.&N.O. Sur.	T.D. 2,485 ft.; straightening hole.
Simmons et al's No. 1 Schultz, 150 ft. from W and center N and S of E half of J. Weber Sur., Abst. 154.	S.D. 1,410 ft.

CRANE COUNTY

Gulf Prod. Co.'s No. 10 McElroy, 1,320 ft. from S and E Sec. 196, Blk. F	Set 8¼-in. csg. 1,113 ft.

CROCKETT COUNTY

Chambers et al's No. 1 Hoover, 1,650 ft. N and 330 ft. from E, Sec. 1, Blk. FF, B.&B. Sur.	S.D. 1,059 ft.
Doleman & Moore's No. 1 Ferner, 2,125 ft. from N and 1,485 ft. from E of Sec. 36, Blk. 2, I.&G.N. Sur.	Spudded and S.D.
Stanolind Oil & Gas Co. et al's No. 1 Todd, 1,370 ft. from N and 1,320 ft. from E, Sec. 67, Blk. UV, G.C.&S.F. Sur.	Drlg. 6,809 ft.
The Texas Company's No. 1 H. B. Ingham, 330 ft. from S and 2,310 ft. from E line, Sec. 36½, I.&G.N. Sur.	T.D. 2,071 ft.; underreaming 8¼-in. csg.
J. D. Young Co.'s No. 1 Shannon, 330 ft. from N and W, Sec. 35, Blk. 1, G.C.&S.F. Sur.	Drlg. 1,995 ft.

CULBERSON COUNTY

Harris & Haun's No. 1 fee	S.D. 2,402 ft.
Milton-Dorsey's No. 1 Biggs, 4,181 ft. from N and 150 ft. from E, Sec. 2, Blk. 112, P.S.L. Sur.	Location.

DAWSON COUNTY

Albaugh et al's No. 1 Robinson, C NW Sec. 46, Blk. M, E.L.&R.R. Sur.	Shut down.

ECTOR COUNTY

Duffey et al's No. 1 Rutledge, 990 ft. from S, 330 ft. from E, Sec. 7, Blk. B-15	Drlg. 3,110 ft.
L. C. Harrison et al's No. 1 Addis, 330 ft. from N and 1,320 ft. from W, Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.	Drlg. 3,806 ft.; gas 3,793 ft. increasing.
Landreth Prod. Co.'s Holt, C SW of SE Sec. 15, Blk. 43, Twp. 1n, T.&P. Sur.	Drlg. 356 ft.
Phillips Pet. Co.'s No. 1 Scharbauer, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 44, Twp. 2s, T.&P. Sur.	S.D. 3,757 ft.; to shoot again.
Thomas et al's No. 1 Edwards, 330 ft. from S, 2,310 ft. from E, Sec. 38, Blk. 43, Twp. 3s, T.&P. Sur.	S.D. 1,950 ft.; underreaming 8¼-in. csg. at 1,700 ft.
H. F. Wurts' No. 1 E. A. Ibbetson et al, 330 ft. from N and E lines of NW Sec. 16, Blk. 46, Twp. 3s, G. M. M.Br.&A. Sur.	S.D. 3,605 ft.

EL PASO COUNTY

Tri-State Oil Co.'s No. 1 Bobadella, 1,325 ft. from S and E lines Sur. 254, S.P. No. 7,247	T.D. 2,190 ft.

(Continued on Page 42)

COMPLETIONS IN WEST TEXAS

Jones County

Southern Oil Co.'s No. 1 Toombs, dry and abandoned, total depth 2,581 feet, two good flows of oil at 2,568-81 feet.

COMPLETIONS IN RANGER DISTRICT

Brown County

Genn Production Co.'s No. 1 Graham estate, dry and abandoned, total depth 2,000 feet. K. J. Michael's No. 1 L. D. Stone, dry and abandoned, total depth 1,382 feet. Sawyer's No. 22 Shore, sand 1,224-43 feet, shot three quarts, initial production 5 bbls., total depth 1,248 feet.

Callahan County

E. L. Anderson's No. 1 Berry, dry and abandoned, total depth 426 feet. J. B. Atwood and others' No. 2 William Ables, sand 395-405 feet, initial production 1,000,000 feet of gas, total depth 405 feet. Hayek Oil Co.'s No. 1 Finley, gas sand 533-37 feet, initial production 580,000,000 feet of gas, total depth 572 feet. C. B. Holmes and others' No. 2 Kelton, sand 747-61 feet, shot five and seven quarts, initial production 26 bbls., total depth 761 feet. George A. Perry's No. 1 Williams, dry and abandoned, total depth 750 feet. Snebold and Rosenfield's No. 2 Finley, oil sand 543-50 feet, initial production 5 bbls., total depth 550 feet. Woodley Petroleum Co.'s No. 25 Radford, sand 417-37 feet, initial production 20 bbls., total depth 437 feet.

Coleman County

Arcadia Refining Co. and others' No. 2 B. Burkett, sand 1,598-1,635 feet, initial production 20 bbls., total depth 1,636 feet. Herbert Oil Co.'s No. 2 Weaver, dry and abandoned, total depth 1,875 feet. Claude Vaughn's No. 1 J. J. Crowder, dry and abandoned, total depth 2,041 feet. Anzac Oil Corp.'s No. 1 L. M. Polk, dry and abandoned, total depth 1,313 feet.

Palo Pinto County

Brazos River Oil & Gas Co.'s No. 1 McAvay, dry and abandoned, total depth 2,048 feet. C. F. Gibson's No. 1 Spore, sandy lime 3,174-95 feet, initial production 834,000,000 feet of gas, total depth 3,195 feet. W. K. Gordon and others' No. 2 H. Caine, dry and abandoned, total depth 3,347 feet.

Shackelford County

J. L. Douglas' No. 5 W. A. Carter, oil sand 618-20 feet, initial production 12 bbls., total depth 620 feet. Gilman and McMurray's No. 6 E. A. Jeter, oil sand 911-33 feet, shot 15 quarts 923-33 feet, initial production 15 bbls., total depth 933 feet. Page Knight and Gwinn's No. 1 Jeter, oil sand 860-72 feet, initial production 5 bbls., total depth 872 feet.

COMPLETIONS IN NORTH TEXAS

Archer County

Frank J. Darr and others' No. 1 Wilson, dry and abandoned, total depth 1,517 feet. The Texas Company's No. 4 K&KB, dry and abandoned, total depth 1,827½ feet. Consolidated Oil Co.'s No. 1 Ray, dry and abandoned, total depth 1,127 feet. Jessie Lincoln's No. 1 Ray, oil sand 1,242-27 feet, initial production 12 bbls., total depth 1,127 feet. W. E. Maxson, Jr.'s No. 16 Green, sandy lime 1,094-1,112 feet, shot

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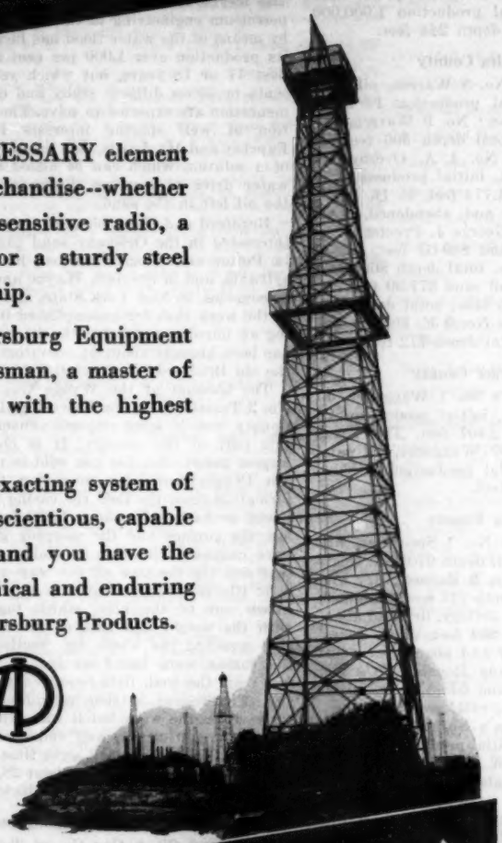

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Cooke County

Cline and Eggers' No. 1 Natt Pealt, dry and abandoned, total depth 1,057 feet.

Grayson County

John Marshall's No. 1 E. C. Kimbrough, dry and abandoned, total depth 610 feet.

Jack County

McKee Drilling Co.'s No. 2 Hunt, dry and abandoned, total depth 605 feet. W. H. Williams' No. 1 Singleton, dry and abandoned, total depth 908 feet.

Throckmorton County

J. W. Robinson's No. 1 Kemp, gas sand 209-44 feet, initial production 1,000,000 feet of gas, total depth 244 feet.

Wichita County

J. L. Bridges' No. 8 Warren, oil sand 504-11 feet, initial production 14 bbls., total depth 511 feet; No. 9 Warren, dry and abandoned, total depth 596 feet. J. Kingsberry, Jr.'s No. 1 A. Overby, oil sand 1,777-81 feet, initial production 20 bbls., total depth 1,774 feet. E. H. Pigg's No. 1 Case, dry and abandoned, total depth 1,952 feet. George J. Proctor's No. 9 Honaker, oil sand 849-69 feet, initial production 25 bbls., total depth 869 feet; No. 10 Honaker, oil sand 377-99 feet, initial production 25 bbls., total depth 869 feet. A. T. Wolfe's No. 9 E. Daume, dry and abandoned, total depth 772 feet.

Wilbarger County

Davis Oil Corp.'s No. 1 Waggoner, oil sand 2,402-04 feet, initial production 26 bbls., total depth 2,407 feet. The Texas Company's No. 407 Waggoner, oil sand 1,033-41 feet, initial production 8 bbls., total depth 1,041 feet.

Young County

Mel Armstrong's No. 1 Spearman, dry and abandoned, total depth 670 feet. Deats and Brazelton's No. 2 Barnett, dry and abandoned, total depth 717 feet. Hamilton and Guynn's No. 1 Jeffery, dry and abandoned, total depth 864 feet. J. G. Jones' No. 1 Stewart, dry and abandoned, total depth 653 feet. King Royalty Co.'s No. 41 Larimore, oil sand 648-57 feet, initial production 15 bbls., total depth 657 feet. Kleiner, Hy Oil Co.'s No. 4 Johnson, oil sand 485-94 feet, initial production 6 bbls., total depth 507 feet. E. R. Perkins' No. 1 Tucker, dry and abandoned, total depth 1,053 feet.

The Texas Company's No. 1 A. C. Casey, dry and abandoned, total depth 662 feet. E. D. Willis' No. 1 Larimore, dry and abandoned, total depth 756 feet. D. L. Wolf's No. 4 Wolf, oil sand 849-74 feet, initial production 20 bbls., total depth 885 feet. Clarco Oil Co.'s No. 2 Marshall, lime 3,866-80 feet, initial production 120 bbls., total depth 3,880 feet. Henson, Tidwell, Phillips' No. 2 Newley, dry and abandoned, total depth 2,750 feet. Seaboard Oil & Gas Co.'s No. 12 Graham, show oil and gas at 3,320-30 feet, temporarily abandoned at 3,330 feet.

COMPLETIONS IN PANHANDLE DISTRICT

Carson County

Texoma Natural Gas Co.'s No. 1-T Urbanczyk, top pay 2,510 feet, initial production 19,300,000 feet of gas, total depth 2,702 feet.

Gray County

The Texas Company's No. 5 Shaw, top pay 2,670 feet, initial production 1,650 bbls., total depth 2,768 feet. The Texas Company's No. 7 Williams (old well deepened), old total depth 2,715 feet, new total depth 2,760 feet, initial production 129 bbls. pumping. Tarber's No. 1 Saunders, abandoned location.

Hutchinson County

Huber Petroleum Co.'s No. 2 Christian, initial production 11,000,000 feet of gas, from 2,280 feet, total depth 2,405 feet. Oates and Morrow's No. 2 Starnes, top pay 3,100 feet, initial production 15 bbls., total depth 3,204 feet.

Seeking Increased Recovery in Bradford; Developments in Oriskany Sand Field

By STAFF CORRESPONDENT

BRADFORD, Pa., Nov. 19. — Dr. George H. Fancher and R. T. Lewis of the petroleum research department of the Pennsylvania State College have concluded a survey of the Bradford Field made for the purpose of collecting production data from leases in the field. The larger oil companies and many smaller operators assisted the two scientists in their research work, the object of which is to devise means of improving the technique of petroleum engineering in the field, which, by means of the water flood has increased its production over 1,000 per cent in the past 17 or 18 years, but which yet presents problems diligent study and experimentation are expected to solve. The question of well spacing interests Doctor Fancher and Mr. Lewis, also the discovery of a solution which can be added to the water drive to increase the recovery of the oil left in the sand.

Bradford and Olean oil men are greatly interested in the Oriskany sand gas field in Potter and Tioga Counties, in Pennsylvania, and in Steuben, Wayne and other counties, in New York State, and much of the work thus far accomplished in adding an important gas area to the country has been brought about by operators from the old Bradford-Allegany oil field.

The blowout at the Wyoga Gas Co.'s No. 2 Tassell in Hebron Township, Potter County, was in some respects unusual for this part of the country. It is not the largest gasser that has run wild in northern Pennsylvania, but according to information from the field the casing is believed to have split about 1,500 feet below the surface and the escaping gas to have caused a vibration so violent as to tear and rip the pipe all the way up the hole. Eleven 30-foot lengths of pipe were blown out of the hole, which together with the weight and bulk of the master gate wrecked the whole rig. Sections of the casing were found as far as 1,500 feet from the well, field reports say. Patrick FitzStevens started rebuilding the rig early in the week but it was expected the job of getting the well under control could not be started until some time next week. The well was making about 28,000,000 feet of gas per day when it blew out.

Report on Homestead Operations

Homestead Oil & Gas Co. of Toronto is carrying on drilling operations in Ontario County, New York, where important gas production has been developed. The Homestead company's No. 1 Easthoim, near Canandaigua, struck a small gas flow, estimated 10,000 feet a day, at 500 feet; increasing to 50,000 feet at 575 feet. Drilling is proceeding on this well. The Oriskany sand is looked for around 1,000 feet, and the Medina formation, which is the principal producing sand in that field, at about 2,600 feet. The company is planning to commence additional drilling in other parts of the field in the near future. It is reported that Lycoming Natural Gas Corp. is securing acreage in the Canandaigua district and that a number of other companies are planning to drill there.

New York-Pennsylvania Gas Field

The Allegheny Gas Co.'s No. 1 Carpenter, which ordinarily should have been completed by this time, has been delayed by a recementing job.

J. B. Reed's No. 1 Champlin is drilling below 3,500 feet.

The Sylvania Corp. has made a location on the Homer Phelps farm in Hebron Township, a short distance from the Wyoga Gas Co.'s No. 1 Tassell, a large gasser.

Oil Near Portville

John Boyle of Bradford, Pa., drilling on the Ellen Crawford farm in Steam Valley, near Portville, Cattaraugus County, New York, found considerable gas at about 1,000 feet. He was drilling for oil and will shoot the sand in an effort to make an oil well of the test.

The Pennsylvania Natural Gas Co. will drill a deep gas test on the R. C. Ford farm, Belfast Township, Allegany County, New York, and a 126-foot derrick has been erected. The company has a block of 6,000 acres and the first test will be drilled to 4,000 feet if necessary.

Tank Wagon Advance in East Is Market Feature

(Continued from Page 23)

cents; 650 steam refined, unfiltered, 19 cents; 600 flash, steam refined, 20 cents; 630 flash, steam refined, 24½ cents; bright stock, No. 8 color, 25 cents; bright stock, No. 6½ color, dil. 24½ cents per gallon, reductions of 1 cent per gallon on all of the latter grades.

Export buying of cylinder oils has proved disappointing in recent weeks, and while there was a slight betterment in inquiries received during the past week, buyers continue bearish in their price views, and are seeking further concessions before placing business.

Domestic demand for neutral oils was confined to small lots for immediate shipment last week, and prices remained quotably unchanged on both red and pale grades.

Wax

Demand has lagged off, as is usual at this time of the year, with consumers endeavoring to hold stocks down pending their annual inventories at the close of December.

Considerable price irregularity has developed in the spot market, and fractions are counting more heavily in competitive trading. Spot 130-132 a.m.p. was quoted one-quarter cent lower at 3 cents per pound. The market on 133-135 a.m.p., which is apparently in short supply at the moment, has been advanced one-eighth cent to 4 cents, with 135-137 a.m.p. showing a corresponding reduction to 4⅛ cents.

Export demand for paraffin wax has likewise fallen off somewhat in the local market. Buyers are inquiring for crude scale in a limited way, and are showing a little interest in fully refined grades, but their price views are considerably under the spot market, and refiners are unwilling to go as low as export buyers are currently bidding.

COLON PRODUCTION

Colon Oil Corp.'s subsidiary in Venezuela reports well No. 10-CM brought in producing at the rate of 2,600 bbls. per day, casing pressure 310 pounds, tubing pressure 275 pounds. Production for the week ended November 11 was 140,292 bbls.

ROCKY MOUNTAIN RUNS

Average daily pipe line runs from fields in the Rocky Mountain territory for the week ending November 19 follow:

	Bbls.
WYOMING	
Salt Creek	20,780
Big Muddy	1,930
Badger Basin	50
Byron-Garland	1,010
Byron (East)	100
Dallas-Derby	430
Dutton Creek	70
Elk Basin	580
Ferris	50
Frannie	410
Grass Creek	1,320
Hamilton Dome	930
Hudson	400
LaBarge	1,280
Lance Creek	40
Lost Soldier	2,290
Midway	100
Oregon Basin	800
Osage	1,140
Pilot Butte	30
Rex Lake	0
Rock River	1,030
Poison Spider	70
Teapot	30
Total Wyoming	34,870
MONTANA	
Buckley-Border	570
Cat Creek	820
Cut Bank	80
Dry Creek	160
Kevin-Sunburst	3,330
Lake Basin	20
Pondera	890
Total Montana	5,870
COLORADO	
Florence	190
Fort Collins and Wellington	770
Iles Dome	600
Moffat	580
Orchard	170
Rangely	50
Tow Creek	250
Total Colorado	2,610
NEW MEXICO	
Artesia	469
Caprock	578
Hogback	390
Jal	990
Rattlesnake	620
Table Mesa	60
Eunice	512
Hobbs	24,995
Lea	2,235
Texas-Pacific	87
Total New Mexico	30,936
Total Rocky Mountain area	74,286
Total previous week	75,149
Difference	863

Wildcat Operations in West Texas

(Continued from Page 40)

FISHER COUNTY

Cranfill & Reynolds' No. 1 George, 400 ft. from N and 380 ft. from E, Sec. 200, Blk. 1, B.B.B.&C. Sur. ..... Drlg. 6,345 ft.

Southern Oil Co.'s No. 1 Purdue, 990 ft. from S and E Sec. 202, Blk. B, B.B.&C. Sur. ..... T.D. 3,105 ft.; T.P. 3,105 ft.; flowed 150 bbls. per hour.

GLASSCOCK COUNTY

Empire G. & F. Co.'s No. 1 Hall, 330 ft. from N and 2,290 ft. from W, Sec. 21, Blk. 33, Twp. 2s ..... Running 15½-in. pipe 281 ft.

B. C. Mann's No. 1 Moore, C NE, Sec. 11, Blk. 35, Twp. 3s, T.&P. Sur. ..... Drlg. 3,410 ft.

Noble Drlg. Co.'s No. 1 Baker, 160 ft. from N and 1,116 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... Drlg. 1,740 ft.

Phillips Pet. Co.'s No. 1 Baker, 150 ft. from N and 1,520 ft. from E, Sec. 21, Blk. 33, Twp. 2s, T.&P. Sur. ..... T.D. 2,130 ft.; swabbed 71 bbls. per hour; T.D. 2,132 ft.

Phillips Pet. Co.'s No. 2 Baker, 338 ft. from N and 2,305 ft. from E, Sec. 21, Blk. 33 ..... Spudded.

Shell Pet. Corp.'s No. 3 Phillips, 3,310 ft. from N and 1,650 ft. from E, Sec. 23, Blk. 33, Twp. 2s ..... Drlg. 1,185 ft.

Tribal Oil Co.'s No. 1-B Edwards, 180 ft. from S and 1,145 ft. from E, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur. ... T.P. 2,122 ft.; T.D. 2,140 ft.; pumped 109 bbls. first hour and 92 bbls. second hour.

Tribal Oil Co.'s No. 2 Edwards, 348 ft. from S and 2,285 ft. from E, Sec. 16, Blk. 33, Twp. 2s, T.&P. Sur. ..... Location.

HOWARD COUNTY

Harrison et al's No. 2 Denman, 2,310 ft. from N and 330 ft. from E, Sec. 10, Blk. 30 ..... Cellar.

Myers et al's No. 1 Denman, 2,305 ft. from S and 2,320 ft. from E, Sec. 14, Blk. 30, Twp. 1s, T.&P. Sur. ..... S.D. 1,560 ft.

Mid-Continent Oil & Gas Co.'s No. 1 Denman, 990 ft. from S and 330 ft. from E, Sec. 10, Blk. 30, Twp. 1s, T.&P. Sur. ..... Cleaning out 2,305 ft.

Sinclair Prairie Oil Co.'s No. 3 Dodge, 1,650 ft. from S and 429 ft. from W, Sec. 11, Blk. 30, Twp. 1s, T.&P. ... T.D. 2,800 ft.; cleaning out and swabbing.

HUDSPETH COUNTY

Patillo-Welsh's No. 1 Briggs ..... S.D. 1,135 ft.

IRION COUNTY

Straughn et al's No. 1 Kaiser, 1,980 ft. from N and 1,396 ft. from W, Sec. 69, H. Cooper Sur. ..... S.D. 501 ft.

JONES COUNTY

Abers et al's No. 1 Burton, 150 ft. from S and 175 ft. from E of 42.4-ac. tract in G. Martinez Sur. ..... S.D. 1,005 ft.; temp. abnd.
Condor Pet. Co.'s No. 1 Sayles, 650 ft. from N and 300 ft. from W, Sec. 3, Blk. 20, T.&P. Sur. ..... Drlg. 510 ft.
Croft et al's No. 2 Swann, 4,350 ft. from S and 1,700 ft. from E. L. Miley Sur. No. 380 ..... Drlg. 280 ft.
Dyer's No. 1 Odom, 200 ft. from S and 170 ft. from W of N 320 acres, G. Zumwalt Sur. ..... Moving in rig.
Johnson's No. 1 Huddleston, 165 ft. from S and W of N half of N half of Sec. 39, Blk. 18, T.&P. Sur. ..... Drlg. 2,035 ft.
Pope & Anderson's No. 2 Swann, 3,050 ft. from S and 1,120 ft. from E of I. Miley Sur. ..... T.D. 2,300 ft.; underreaming 8-in. csg.
Smart & Reynold's No. 1 Reynolds, 2,500 ft. from N and 150 ft. from W, Sec. 2, W. T. Scott Sur. No. 3. .. S.D. 1,130 ft.
C. S. Spelling et al's No. 1 Lillie, 200 ft. from N and W Sec. 4, E. Miller Sur. No. 2 ..... S.D. 2,030 ft.
Southern Oil Co.'s No. 1 Swann, 1,000 ft. from E and 900 ft. from S. of I. Miley Sur. ..... Moving in tools.
Young et al's No. 1 Harrell, 150 ft. from S and E of N half of Sec. 8, O.A.L. Sur. ..... Location.

LOVING COUNTY

Adams et al's No. 1 Reagan-McElvain, 2,310 ft. from NW and 1,650 ft. from NE Sec. 34, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,165 ft.
Columbia Oil & Gas Co.'s No. 2 Wheat, 2,310 ft. from NW and 330 ft. from SW Sec. 85, Blk. 1, W.&N.W. Sur. ..... Drlg. 4,075 ft.
Eppenauer Drlg. Co.'s No. 1 Victor, 2,310 ft. from NE and 330 ft. from SE Sec. 4, Blk. 2, W.&N.W. Sur. ..... S.D. 4,125 ft.
Goldman et al's No. 1 Allen, 330 ft. from NE and NW of Sec. 90, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,670 ft.
Goldman et al's No. 2 Allen, 330 ft. from NW, 2,310 ft. from SW, Sec. 90, Blk. 1, W.&N.W. Sur. ..... Shut down.
Goldman et al's No. 1 Reagan-McElvain, 330 ft. from NE, 2,310 ft. from NW, Sec. 34, Blk. 1, W.&N.W. Sur. Shut down.
Lewis & Slagel's No. 1 Johnson, 330 ft. from N and 1,650 ft. from W, Sec. 6, Blk. 56, Twp. 1, T.&P. Sur. .. S.D. 2,280 ft.
Martin et al's No. 1 Wheat, 990 ft. from SW and SE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... Drlg. 3,075 ft.
Martin's No. 2 Freels, 4,175 ft. from NE and 412 ft. from NW, Sec. 92, Blk. 1, W.&N.W. Sur. ..... Drlg. 1,070 ft.
Miller et al's No. 1 Ferguson, 990 ft. from NE of Sec. 44, Blk. 29 ..... Spudded and S.D.
Thomas' No. 1 Wheat, 2,310 ft. from NW, 990 ft. from NE, Sec. 83, Blk. 1, W.&N.W. Sur. ..... S.D. 4,010 ft.
Trinity Drlg. Co.'s No. 1 Wheat, 2,310 ft. from SW, 330 ft. from SE, Sec. 3, Blk. 2, W.&N.W. Sur. ..... S.D. 1,300 ft.

MENARD COUNTY

Priest's No. 1 Sorrel, 1,000 ft. from E and 200 ft. from S cor., Sec. 132, E.L.R.R. Sur. ..... S.D. 2,869 ft.

PECOS COUNTY

Aero Oil & Gas Co.'s No. 3 Byrne, 2,430 ft. from NW and 1,485 ft. from SW, Sec. 54, Blk. 10, H.&G.N. Sur. .. Drlg. 1,515 ft.; show gas 1,312 ft.
Cardinal Oil Co.'s No. 2-G Tippett, 660 ft. from S and 330 ft. from E of No. 2 Tippett, Sec. 61, Blk. 194, G.C.&S.F. Sur. ..... T.D. 302 ft.; running csg.
Cardinal Oil Co.'s No. 14-E Tippett, 200 ft. from N and 2,460 ft. from E, Sec. 40, Blk. 194, G.C.&S.F. Sur. .... Drlg. 220 ft.
Corvette Oil Corp.'s No. 8 H. Monroe, 1,040 ft. from E line and 150 ft. from N line of Sec. 39, G.C.&S.F. Sur., Blk. 194 ..... Location.
Kane Prod. Co.'s No. 1 Pecos Valley, 330 ft. from NW and 1,650 ft. from SW, Sec. 34, Blk. 3, H.&T.C. Sur. .. Drlg. 1,375 ft.
Massey's No. 1 Iowa Realty Trust, 150 ft. from NE and 1,483 ft. from NW, Sec. 21, Blk. 10, H.&G.N. Sur. .... Location.
Messinger et al's No. 1 Jones, 1,200 ft. from NW, 1,290 ft. from SW, Sec. 5, Blk. 9, H.&G.N. Sur. ..... Drlg. 308 ft.
Winfield et al's No. 1 Eaton, 1,170 ft. from NE and 2,490 ft. from SE, Sec. 35, Blk. 3, H.&T.C. Sur. ..... Rigging up.

PRESIDIO COUNTY

Sadler et al's No. 1 Bledsoe, 2,640 ft. from N and W Sec. 15, Blk. 354, G.C.&S.F. Sur. ..... S.D. 328 ft.

REAGAN COUNTY

Big Lake Oil Co.'s No. 7-C University, 1,570 ft. from W and 725 ft. from S, Sec. 25, Blk. 9 ..... T.D. 8,825 ft.; producing.
Big Lake Oil Co.'s No. 8-C University, 710 ft. from S and 2,410 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 4,120 ft.
Big Lake Oil Co.'s No. 9-C University, 2,410 ft. from N and 765 ft. from E, Sec. 12, Blk. 2 ..... Drlg. 2,582 ft.
Big Lake Oil Co.'s No. 181 University, 1,700 ft. from S and 2,000 ft. from W, Sec. 10, Blk. 2 ..... T.D. 2,510 ft.; rerunning 8¼-in. csg.
Continental Oil Co.'s No. 6-B University, 765 ft. from N and 1,980 ft. from W, Sec. 36, Blk. 9 ..... Drlg. 3,435 ft.
Group Oil Corp.'s No. 5-B University, 2,700 ft. from S and 1,775 ft. from W, Sec. 36, Blk. 9 ..... T.D. 3,485 ft.; flowing 700 bbls. daily.

REEVES COUNTY

Cordova Union Oil Co. et al's No. 1 Wright, 1,330 ft. from S and W, Sec. 58, Cassell's Sur. ..... Drlg. 725 ft.
McDorman et al's No. 1 Ray Roberts et al, 2,310 ft. from S and E lines of Sec. 22, Blk. 59, P.S.L. Sur. .... S.D. 2,025 ft.

RUNNELS COUNTY

Dutton et al's No. 1 Dean, 5,475 ft. from NE and 1,048 ft. from NW in J. Heil Sur. No. 519 ..... S.O. 3,417-20 ft.; S.D. 3,600 ft.

SCHLEICHER COUNTY

Eastland Oil Co.'s No. 1 Joe Tisdale, C Sec. 29, Blk. M, G.H.&S.A. Sur. ..... T.D. 5,410 ft.
Wesner et al's No. 1 Nicks, 2,310 ft. from N and 2,302 ft. from E of Sec. 77, Blk. LL, T.C. Sur. ..... Fish 5,580 ft.
George Wilson's No. 1 Page, Sec. 40, Blk. L, 1,290 ft. from N, 1,570 ft. from W, G.H.&S.A. Sur. ..... S.D. 5,052 ft.

SCURRY COUNTY

G. E. Dickman et al's No. 1 F. C. Davis, 1,000 ft. N and 1,770 ft. W of SE cor. of Sec. 275, Blk. 2, H.&T.C. Sur. ..... S.D. 5,100 ft.
W. S. Guthrie's No. 1 Clarkson, 1,320 ft. from S and W, Sec. 245, Blk. 97, H.&T.C. Sur. ..... Location.
Heinzleman et al's No. 1 Hood, 436 ft. from N and 489 ft. from E, Sec. 87, Blk. 3, H.&T.C. Sur. ..... S.D. 500 ft.
Scurry County Oil Exchange's No. 1 Earnest, 2,310 ft. from N and W, Sec. 68, Blk. 3, H.&G.N. Sur. ..... Spudded and S.D.
Seifert & Dibble's No. 1 T. M. Blackburn, 2,310 ft. from N and 2,310 ft. from W line of Sec. 153, Blk. 97, H.&T.C. Sur. ..... S.D. 4,992 ft.

TAYLOR COUNTY

Urban's No. 1 Blair, 1,500 ft. from S and 150 ft. from W of NE 198 varas Guadalupe County School Lands, Lot 21 ..... Drlg. 940 ft.

TERRELL COUNTY

Big Bend Oil Co.'s No. 1 Bassett, C NW Sec. 155, Blk. D, M-K-T Sur. ..... S.D. 2,269 ft.
Keck Pecos Trust Co.'s No. 1 Hamilton, C Sec. 6, Georgetown Ry. Sur. ..... S.D. 3,150 ft.; moved off tools.
McPhee-Briggs' No. 1 Kern, 330 ft. from S and W, Sec. 15, Blk. D-5, M-K-T Sur. ..... S.D. 500 ft.
Miller Bros.' No. 1 Allison & Burke, C NW Sec. 10, Blk. 176, T.&P. Sur. ..... S.D. 120 ft.
Mid-Kansas Oil & Gas Co.'s No. 1 Goode, 2,152 ft. from E and 330 ft. from S. Sec. 26, Blk. 161, G.C.&S.F. Sur. S.D. 6,120 ft.
Jones et al's No. 1 Tankenham, C SE NW Sec. 43, Blk. B-2, C.C.S.D.&R.G.N.G. Sur. ..... S.D. 2,545 ft.
Sides et al's No. 1 Phelps, 2,157 ft. from N and 2,482 ft. from W, Sec. 5, G. W. Hurley Sur. ..... S.D. 3,525 ft.

TOM GREEN COUNTY

Belding & Dutton's No. 1 Norsworthy, 1,640 ft. from S and 587 ft. from E of John McNeese Sur. ..... S.D. 760 ft.; S.O. and gas 725 ft.
Mintex Oil Co.'s No. 1 Campbell Est., 446 ft. from S and 630 ft. from W of Sec. 180, Dist. No. 11, S.P. Sur. .... S.D. 1,994 ft.
Pratt & Hancock's No. 2 Lewis, 100 ft. N and 330 ft. E of most northerly SW cor. of Joshua S. Grant Sur. No. 2 ..... S.D. 200 ft.

UPTON COUNTY

Clark-Cooper's No. 1 Lane, 2,310 ft. from N and 990 ft. from E, Sec. 36, Blk. 1, M-K-T Sur. ..... S.D. 2,270 ft.; 1,800 ft. oil in hole.
White's No. 1 Lane, 2,310 ft. from S and 990 ft. from E Sec. 36, Blk. 1, M-K-T Sur. ..... S.D. 2,655 ft.

VAL VERDE COUNTY

Couch et al's No. 1 J. P. Yoss, 1,300 ft. from the N line and E line of Sec. 31, Blk. 1, I.&G.N. Sur. ..... S.D. 400 ft.
O. O. Owens' No. 1 Mills, Sec. 128, Blk. 1, I.&G.N. Sur., elev. 2,130 ft. ..... S.D. 6,780 ft.

WARD COUNTY

Abell Bros.' No. 4 Smith, 990 ft. from SE and 385 ft. from NE of C of Sec. 4, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,055 ft.
Abell Bros.' No. 1 Hayzlett, 1,650 ft. from NW and 1,320 ft. from SW, Sec. 3, Blk. 5, H.&T.C. Sur. ..... Ran 10-in. csg. 735 ft.
Atlantic Oil Prod. Co.'s No. 2 Barrow, 1,650 ft. from NE and 330 ft. from NW, Sec. 22, Blk. 5, H.&T.C. Sur.... T.D. 2,566 ft.; swabbed 30 bbls. in 45 hrs. after shot.
Atlantic Oil Prod. Co.'s No. 1 Blank-Camp, 1,320 ft. from NW and SW Sec. 14, Blk. 34, H.&T.C. Sur. ..... T.D. 3,142 ft.; ran 6⅝-in. csg.
Atlantic Oil Prod. Co.'s No. 1 Jones, 330 ft. from SW and 1,650 ft. from SE, Sec. 25, Blk. B-29, P.S.L. Sur.. Location.
Barnsdall Oil Co.'s No. 3 Henry, 330 ft. from NE and 1,650 ft. from SE, Sec. 28, Blk. 29 ..... Drlg. 1,765 ft.
Bentley et al's No. 1 Carson, 1,650 ft. from NE and SE Sec. 26, Blk. 5, H.&T.C. Sur. ..... Spudded 50 ft.
Bradford's No. 1 Carson, 1,650 ft. from SE and 990 ft. from NE Sec. 26 ..... Shut down.
Bundy et al's No. 1 Bennett, 2,310 ft. from NW and SW Sec. 16, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,220 ft.
Caprito et al's No. 1 Beatty, 330 ft. from SW and 990 ft. from SE, Sec. 3, Blk. 34, H.&T.C. Sur. ..... S.D. 2,500 ft.; tools moved off.
Eastland Oil Co. et al's No. 1 Grimes, 445 ft. from NE and 1,320 ft. from SE Sec. 14, Blk. 34, H.&T.C. Sur.... Drlg. 920 ft.
Eastland Oil Co.'s No. 2 Grimes, 495 ft. from NE and 440 ft. from SE, Sec. 14, Blk. 34, H.&T.C. Sur. ..... Location.
Eastland Oil Co.'s No. 3 Weiss, 954 ft. from NW and 284 ft. from NE of Sec. 4, Blk. 34 ..... Drlg. 1,425 ft.
Eppenauer's No. 1 Purcell, 365 ft. from SW and 1,650 ft. from SE of Sec. 17, Blk. 14, H.&T.C. Sur. ..... T.D. 2,740 ft.
Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 9, Blk. 3, B.&B. Sur. ..... Cellar.
H. V. Greer's No. 1 Carr, 150 ft. from NW and 510 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... S.D. 2,223 ft.
Gulf Prod. Co.'s No. 13 Hutchings, 3,347 ft. from N and 330 ft. from E, Sec. 5, Blk. F ..... S.D. 2,665 ft.; flowing over 2,000 bbls. day.
Gulf Prod. Co.'s No. 14 Hutchings, 330 ft. from N and W of Sec. 9, Blk. O ..... Drlg. 1,820 ft.
Gulf Prod. Co.'s No. 23 O'Brien, 330 ft. from N and 990 ft. from E Sec. 18, Blk. F ..... Drlg. 1,650 ft.
Gulf Prod. Co.'s No. 24 O'Brien, 330 ft. from N and 990 ft. from W, Sec. 19, Blk. F ..... Drlg. 1,410 ft.
Gulf Prod. Co.'s No. 25 O'Brien, 330 ft. from N and W Sec. 20, Blk. F ..... Drlg. 1,110 ft.
Kregle et al's No. 1 Keasler, 3,062 ft. from SE, 330 ft. from NE, Sec. 46, Blk. 34, H.&T.C. Sur. ..... S.D. 2,060 ft.
Leidecker et al's No. 2 Bennett, 2,310 ft. from NW and 1,650 ft. from NE, Sec. 16, Blk. 34 ..... Drlg. 2,460 ft.
Maxwell's No. 1 Smith, 330 ft. from NW and SW, Sec. 26, Blk. 34, H.&T.C. Sur. ..... Location.
R. F. Owen's No. 1 Lee, 1,344 ft. from NW and 4,532 ft. from SW Sec. 1, J. Howe Sur. ..... S.D. 2,720 ft.
O'Quinn et al's No. 1 Reynolds, 2,970 ft. from NW and 990 ft. from SW, Sec. 12, Blk. 5, H.&T.C. Sur. ..... Drlg. 1,935 ft.
Penn Oil Co.'s No. 1 Hardage-Wilson, 330 ft. from NE and SE Sec. 11, Blk. 34, H.&T.C. Sur. ..... Drlg. 250 ft.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from NE and SE, Sec. 62, Blk. 33, H.&T.C. Sur. ..... Fishing 2,550 ft.
Rixford-Fuglarr's No. 1 London, 660 ft. NW, 330 ft. NE E cor. Sec. 10, Blk. 32, H.&T.C. Sur., but in Sec. 8 ..... S.D. 2,291 ft.
Stanolind Oil & Gas Co.'s No. 1 Grimes, 1,485 ft. from NE and 2,112 ft. from SE, Sec. 14, Blk. 34 ..... T.D. 2,475 ft.; T.P. 2,425 ft.
Sturm et al's No. 4 Jones, 2,310 ft. from SW and 990 ft. from SE Sec. 25, Blk. B-29, P.S.L. Sur. ..... Drlg. 2,175 ft.
T. P. Coal & Oil Co.'s No. 5 James, 330 ft. from NE and 1,810 ft. from SE Sec. 5, Blk. 34, H.&T.C. Sur. ..... T.D. 2,386 ft.
Thompson's No. 1 Johnson, 2,310 ft. from SW and 330 ft. from NW, Sec. 9, Blk. 34, H.&T.C. Sur. ..... Drlg. 2,315 ft.
Weekly Oil Corp. and L. E. Hultz' No. 1 Burks, 330 ft. from SE and 1,380 ft. from SW, Sec. 26, Blk. B-29, P.S.L. Sur. ..... T.D. 2,618 ft.; plugged back to 2,470 ft.
Zoch et al's No. 1 Brillhart, 2,310 ft. from SE and SW, Sec. 13, Blk. 34, H.&T.C. Sur. ..... Drlg. 1,130 ft.

WINKLER COUNTY

Richardson et al's Scarborough, 990 ft. from N and W Sec. 1, Blk. 77 ..... Drlg. 1,320 ft.
Richardson et al's No. 1 Scarborough, 990 ft. from N and 1,650 ft. from W, Sec. 1, Blk. 77 ..... Drlg. 2,440 ft.
Sid Richardson et al's No. 2 Sealy estate, 1,650 ft. from S and 330 ft. from W, Sec. 94, Blk. A, G.M.M.B.&A. Sur. ..... S.D. 2,685 ft.
Richardson et al's No. 2 Scarborough, 1,980 ft. from N and 660 ft. from E, Sec. 1, Blk. 77, P.S.L. Sur. ..... Drlg. by tools 2,630 ft.

Wildcat Operations in Texas Panhandle

Week Ending November 21

CARSON COUNTY

Company, well, farm name, section and block—	Remarks:
Gulf Prod. Co.'s No. 6 Cooper, 330 ft. from N and W SW, Sec. 4, Blk. 9, I.&G.N. Sur.	Standardizing 2,858 ft.
H. A. M. Oil Co.'s No. 3 Cooper, 990 ft. from S. 330 ft. from W of E half NE, Sec. 5, Blk. 9, I.&G.N. Sur.	Drlg. 2,585 ft.
Osborne's No. 1 Byrum, 330 ft. from N and E, N½ NW, Sec. 188, Blk. 3, I.&G.N. Sur.	T.P. 3,081 ft.; T.D. 3,263 ft.; plugged back to 3,254 ft.; pumped 18 bbls. oil and 35 bbls. water.
Panhandle Rfg. Co.'s No. 1 Kirby, 1,320 ft. N and W, Sec. 183, Blk. 3, I.&G.N. Sur.	Location.
Sinclair Prairie Oil Co.'s No. 1 Cooper, 330 ft. from S and W, Sec. 4, Blk. 9, I.&G.N. Sur.	Standardizing 3,008 ft.
Skelly Oil Co.'s No. 20 W. Schaffer, 1,320 ft. from S and E, Sec. 87, Blk. 4, I.&G.N. Sur.	T.P. 2,985 ft.; drlg. plug 2,985 ft.
Skelly Oil Co.'s No. 21 West Schaeffer, 1,320 ft. N and E, Sec. 68, Blk. 4, I.&G.N. Sur.	Standardizing 2,175 ft.
Skelly Oil Co.'s No. 14 W. Schaffer, 330 ft. S and W, Sec. 191, Blk. 3, I.&G.N. Sur.	Rig.
Stubblefield-Shell's No. 3 Cooper, 330 ft. from N and 330 ft. from E of SE, Sec. 5, Blk. 9, I.&G.N. Sur.	Cellar.
Texoma Nat. Gas Co.'s No. 1-G Urbanczyk, 1,333 ft. S. 2,653 ft. E S half, Sec. 19, Blk. 4, I.&G.N. Sur.	Drlg. 1,125 ft.
The Texas Co.'s No. 1 Byrum, 330 ft. from N and W, S half NW, Sec. 188, Blk. 3, I.&G.N. Sur.	T.D. 3,252 ft.; to run 5-in. csg.
Union Pet. Co.'s No. 3 Cooper, 330 ft. N, 310 ft. E SE, Sec. 5, Blk. 9, I.&G.N. Sur.	Cellar.

CHILDRESS COUNTY

Robertson's No. 1 Biddy, center S 26½ acres of N. Laughlin Sur. Blk. T	Rig.

COLLINGSWORTH COUNTY

Cochran Bros.' No. 1 Atkinson, 660 ft. from N and E, Sec. 26, Blk. 21, H.&G.N. Sur. ..... Drlg. 320 ft.

Kates et al's No. 1 Hickman, center NE, Sec. 43, Blk. 10, H.&G.N. Sur. ..... S.D. 1,750 ft.

Kates et al's No. 1 Bell, 990 ft. from N, 2,310 ft. from W, Sec. 21, Blk. 102, H.&G.N. Sur. ..... S.D. 1,340 ft.; elevation 1,910 ft.

COTTLE COUNTY

Darby Pet. Co. et al's No. 1 Puersil, 330 ft. from N, 1,320 ft. from E. Sec. 40, Blk. B, John H. Stevens Sur. ..... T.D. 3,860 ft.; underreaming 8-in. csg.

DEAF SMITH COUNTY

Western Union Oil Co.'s No. 1 Farwell, C NW, Sec. 18-3n-2e ..... S.D. 1,240 ft.

GRAY COUNTY

Back & Barber's No. 1 Back, 660 ft. from S, 330 ft. from W, Sec. 140, Blk. 25, H.&G.N. Sur. ..... S.D. 2,426 ft.

Baldridge et al's No. 1 Melton, 330 ft. from NE & half NE, Sec. 95, Blk. B-2, H.&G.N. Sur. ..... Drlg. 2,025 ft.; 2,000,000 ft. gas.

Baldridge et al's No. 1 Catlin, 330 ft. S and E of E 80 of 158-ac. tract, Sec. 47, Blk. 2, L.&G.N. Sur. ..... Drlg. 340 ft.

Bell O. & G. Co.'s No. 2 Tedesco Webb, 330 ft. S and W, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Rigging up standard tools.

Boyes et al's No. 1 Colebank-Morse, 330 ft. NE, Sec. 65, Blk. 25, H.&G.N. Sur. ..... S.D. 2,554 ft.; shot. 50 qts.; no results.

Christy's No. 1 Gethings, 330 ft. from N and E, Sec. 18, Blk. A-9, H.&G.N. Sur. ..... Drlg. 555 ft.

Sam Danner's No. 1 Cobb, 330 ft. S and W NE, Sec. 165, Blk. 3, L.&G.N. Sur. ..... Rig on ground.

Dixon Creek Oil Co.'s No. 1 Chapman, 330 ft. from S and W, Sec. 69, Blk. 25, H.&G.N. Sur. ..... T.D. 2,800 ft.; to plug back.

Dolomite Prod. Co.'s No. 1 Sailor, 330 ft. N and E, Sec. 111, Blk. 3, L.&G.N. Sur. ..... Rig.

Gerber O. & G. Co.'s No. 1 Stubbs, 330 ft. from S, 990 ft. from W, Sec. 8, Blk. 3, B.&B. Sur. ..... Bldg. rig.

Graham-Crue Hoover's No. 1 Barrett, 350 ft. S, 300 ft. W N½ NE, Sec. 130, Blk. 3, L.&G.N. Sur. ..... T.D. 3,130 ft.; set csg.; flowing through cavings.

Gray County Prod. Co.'s No. 1 Huselby, 330 ft. from S and W, E½ NW, Sec. 55, Blk. 25, H.&G.N. Sur. ..... Rig.

Gulf Oil Corp.'s No. 2 Catlin, 330 ft. S and W NW cor. SW, Sec. 46, but in Sec. 57, Blk. 3, L.&G.N. Sur. ..... Rig.

Kewanee O. & G. Co.'s No. 1-F Morse, 330 ft. from S and W, Sec. 3, Blk. 2S ..... S.D. 2,660 ft.

R. H. Locke's No. 1 McKnight, 1,320 ft. N and W, Sec. 178, Blk. B-2, H.&G.N. Sur. ..... Rig on ground.

Magnolia Pet. Co.'s No. 7 fee, 660 ft. N and W SW, Sec. 14, Blk. 3, L.&G.N. Sur. ..... Drlg. 2,600 ft.

Masda-Shell Pet. Corp.'s No. 3 Combe-Worley, 330 ft. from N and W NE, Sec. 25, Blk. 3, L.&G.N. Sur. ..... Drlg. 1,935 ft.

Mid-Kansas O. & G. Co.'s No. 3 Webb, 990 ft. from N, 330 ft. from W NE, Sec. 61, Blk. 25, H.&G.N. Sur. ..... Drlg. 2,336 ft.

Mid-Kansas O. & G. Co.'s No. 1 Gethings, 330 ft. S, 1,650 ft. W S½ S½, Sec. 13, Blk. A-19, H.&G.N. Sur. .. Cellar.

Ochiltree et al's No. 1 Hughey, 340 ft. S, 330 ft. E E half SE, Sec. 139, Blk. 3, L.&G.N. Sur. ..... Rigging up rotary.

Parton & Holt's No. 2 Morse, 330 ft. from W, 350 ft. from N, W½ SW, Sec. 5, Blk. 2S, H.&G.N. Sur. ..... S.D. 2,635 ft.

Parton Holt's No. 3 Morse, 660 ft. from N and E of E half SW, Sec. 5, Blk. 2S, H.&G.N. Sur. ..... Drlg. 2,533 ft.

Pulse-Shell's No. 1 Brown, 330 ft. from N, 950 ft. from E of NW, Sec. 128, Blk. 3, L.&G.N. Sur. ..... Drlg. 2,833 ft.

Quicksand Oil Co.'s No. 3 Chapman, 165 ft. N, 775 ft. from E of W 60 ac. of N½ NW, Sec. 69, Blk. 25, H.&G.N. Sur. ..... Spudded.

Richardson's No. 1 Wright, 330 ft. from S and W, Sec. 12, Blk. 3, L.&G.N. Sur. ..... S.D. 2,959 ft.

Saunders et al's No. 3 Sullivan, 822 ft. from W, 321 ft. from NE, 160 ft. S, 264 ac. of N½, Sec. 136, Blk. 3, L.&G.N. Sur. ..... Will plug back to 2,375 ft. and shoot.

Skelly Oil Co.'s No. 2 South Jackson, 330 ft. from N, 990 ft. from E, Sec. 58, Blk. B-2 ..... Cementing back to 1,970 ft.

Skelly Oil Co.'s No. 7 Saunders, 330 ft. from N, 360 ft. from W, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... S.D. 2,765 ft.; T.P. 2,680 ft.; flowing 744 bbls. first 24 hrs.

Skelly Oil Co.'s No. 8 Saunders, 990 ft. S, 1,200 ft. from W, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,425 ft.

Tedesco-Bell O. & G. Co.'s No. 2 Morse, 330 ft. from N and W N half SE, Sec. 1, Blk. 2S, H.&G.N. Sur. ..... S.D. 2,460 ft.

Texoma Nat. Gas Co.'s No. 1-E Yowell, 1,321 ft. N, 1,317 ft. E, Sec. B-2, Blk. 213, H.&G.N. Sur. ..... Standardizing.

The Texas Co.'s No. 6 Davis, 1,610 ft. from 1,320 ft. from E, Sec. 8, Blk. 1, A.C.H.&B. Sur. ..... Drlg. 2,240 ft.

The Texas Co.'s No. 2 Barrett, 1,023 ft. N, 300 ft. E NW, Sec. 130, Blk. 3, L.&G.N. Sur. ..... Rigging up rotary.

The Texas Co.'s No. 2 Frashier, 997 ft. N, 1,323 ft. from E, Sec. 163, Blk. 3, L.&G.N. Sur. ..... Standardizing 2,107 ft.

The Texas Co.'s No. 1 Pope, 330 ft. from N and E of W half SE, Sec. 173, Blk. 3, L.&G.N. Sur. ..... T.D. 2,050 ft.; swedging pipe.

The Texas Co.'s No. 23 Saunders, 300 ft. S, 330 ft. from W SE, Sec. 4, Blk. 1, A.C.H.&B. Sur. ..... Standardizing 2,558 ft.

The Texas Co.'s No. 12 Williams, 300 ft. N, 330 ft. W NE, Sec. 7, Blk. 1, A.C.H.&B. Sur. ..... Fishing 2,744 ft.; T.P. 2,618 ft.

The Texas Co.'s No. 14 Williams, 330 ft. N, 370 ft. W, Sec. 7, Blk. 1, A.C.H.&B. ..... Drlg. 2,135 ft.

The Texas Co.'s No. 15 Williams, 330 ft. N and E, Sec. 6, Blk. 1, A.C.H.&B. Sur. ..... Rigging up rotary.

Sam Travis' No. 1 Back, 330 ft. S and E E half NE, Sec. 44, Blk. 25, H.&G.N. Sur. ..... Moving in material.

Trippiehorn Bros.' No. 1 Lovett, 330 ft. from N and W, Sec. 57, Blk. B-2, H.&G.N. Sur. ..... T.D. 3,157 ft.; swabbed 75 bbls. in 12 hrs.

Weltzel Oil Co.'s No. 2 Morse, 330 ft. from S and E of N half NW, Sec. 67, Blk. 25, A.&G.N. Sur. ..... T.D. 2,675 ft.; may abnd.

HEMPHILL COUNTY

Hoover's No. 1 Hoover, 350 ft. from N, 1,300 ft. from E, G. S. Hood Sur. ..... Drlg. 5,232 ft.

HUTCHINSON COUNTY

Alexander's No. 1 Cockrell, 330 ft. N and E of E 80 of S 160, Sec. 3, Blk. M-2, T.C. Sur. ..... Rig.

Base's No. 1 Moore, 330 ft. from S, 330 ft. from E, in 80 ac. in NW, Sec. 21, Blk. M-21, T.C.R.R. Sur. ..... T.D. 2,030 ft.; est. 5 or 10 bbls. may plug.

Danciger O. & R. Co.'s No. 1 Johnson, 330 ft. N and W, SE, Sec. 34, Blk. Y, A.&B. Sur. ..... Spudded and S.D.

Deal O. & G. Co.'s No. 3 Sanford, 330 ft. N and E of N 80 ac., S 160 ac., Sec. 81, Blk. 46, H.&T.C. Sur. .... S.D. 450 ft.

Holmes & Newbiock's No. 2 Moore-Langdon, 330 ft. from N and W, Sec. 125, Blk. 4, L.&G.N. Sur. ..... T.D. 2,109 ft.; T.P. 2,026 ft.; cleaning out after shot.

Huber Pet. Co.'s No. 1 Moyer-Johnson, 990 ft. from N, 330 ft. from E half SW, Sec. 34, Blk. Y, A.&B. Sur. ..... T.D. 2,370 ft.; underreaming 8-in. csg.

Huber Pet. Co.'s No. 1 Works, 2,630 ft. S, 660 ft. E, Sec. 7, Blk. Y-2, T.T. Sur. ..... Rigging up standard tools.

Liner Drlg. Co.'s No. 1-D Johnson, 350 ft. from N and E, Sec. 6, Blk. 1, B.&B. Sur. ..... Plugged back to 2,146 ft.; S.D.

Joe Murphy's No. 1 Watkins, 440 ft. from N and W of N half, Sec. 13, Blk. M-21 ..... T.D. 2,300 ft.; pulled in rig.

Pharis Oil Co.'s No. 5 Smith, 660 ft. from N and W, SW, Sec. 14, Blk. Y, M.&C. Sur. ..... Shut down.

Stanolind O. & G. Co.'s No. 4-A Ware, 330 ft. S and W NE, Sec. 134, Blk. 4, L.&G.N. Sur. ..... Location.

Stansylvania Oil Co.'s No. 3 Stansbury, 336 ft. from S, 1,264 ft. from W, Sec. 139, Blk. Z, E.L.&R.R. Sur. ..... T.D. 3,035 ft.; T.P. 2,975 ft.; estm. 50 bbls.; cleaning out.

Steckel Prod. Co.'s No. 2-D Whittenburg, 1,065 ft. from S and W, Sec. 38, Blk. M-23, T.C. Sur. ..... T.D. 310 ft.; ran csg.

Texilvania Oil Co.'s No. 1 Halle, 330 ft. S, 330 ft. W, Sec. 16, Blk. 1, E.L.R.R. Sur. ..... Drlg. 145 ft.

LIPSCOMB COUNTY

Okla. Public Service Co.'s No. 1 C. W. Jones, NE SW, Sec. 100, H.&T.C. Sur. ..... T.D. 5,002 ft.

MOORE COUNTY

Canadian River Gas Co.'s No. 2-A Perkins, 3,250 ft. S of most northerly NW cor, 200 ft. W of E line, Sec. 54, Blk. 47, H.&T.C. Sur. ..... Cellar.

Dogie Oil Co.'s No. 1 Greenwald, 330 ft. from N and W, Sec. 277, Blk. 44, H.&T.C. Sur. ..... Drlg. 1,475 ft.

Shamrock Oil & Gas Co.'s No. 2 Brumley, 330 ft. from N and W, Sec. 366, Blk. 44, H.&T.C. Sur. ..... Fishing 3,000 ft.

Shamrock Oil & Gas Co.'s No. 1 Burnett, 660 ft. from S, 330 ft. from W, Sec. 359, Blk. 44, H.&T.C. Sur. .... T.D. 2,739 ft.; standardizing.

MOTLEY COUNTY

Matador Oil Corp.'s No. 1 Owens, C NE, Sec. 10, Blk. G, B.&B. Sur. ..... S.D. 530 ft.

OLDHAM COUNTY

Amalgamated German-American Oil Corp.'s No. 1 Norton, 330 ft. S and E, Sec. 13, T.&N.O. Sur. ..... S.D. 400 ft.

Chambers et al's No. 1 Herring, CNL, Sec. 20, Blk. S, G.C.&S.F. Sur. ..... T.D. 4,000 ft.; fishing.

ROBERTS COUNTY

Chicken Creek Oil Co.'s No. 1 Ledrick, 330 ft. N and W, Sec. 55, Blk. C, G.&M. Sur. ..... Drlg. 4,527 ft.

WHEELER COUNTY

Delaney et al's No. 1 Sitter, 330 ft. from S and W of E half NE, Sec. 33, Blk. 24 ..... 40,000,000 ft. gas at 2,025 ft.; trying to kill gas.

Devore & Robinson's No. 1 Sitter, 2,310 ft. from S and E, E½, Sec. 33, Blk. 24, H.&G.N. Sur. ..... T.D. 2,760 ft.; S.D. for pipe line connection.

B. M. Rhodes' No. 1 Noel, 330 ft. S and E NE, Sec. 54, Blk. 24, H.&G.N. Sur. ..... Moving in material.

East Central Texas Wildcats

(Continued from Page 39)

Hooper et al's No. 1 Doctor Overton, 330 ft. from N and E lines of tract and 330 ft. out of most easterly NE cor. of survey, Wesley Dikes Sur. ..... Partly rigged up and S.D.

L. J. Hopcroft et al's No. 1 J. R. Taylor, 2,000 ft. from E line and 2,000 ft. from S line of survey, G. M. Doherty Sur. ..... Location.

Loring Oil Co.'s No. 1 F. M. Swearingen, 330 ft. from S and E lines of 68-ac. tract, 2,800 ft. from W line and 330 ft. from S line of survey, Oliver Lund Sur., 1 mile SW of Maydelle ..... Drlg. 50 ft.

Mid-Kansas Oil & Gas Co.'s No. 1 J. A. Layne, 316 ft. from N line and 330 ft. from W line of lease, M. D. L. S. Coy Sur. ..... Derrick.

Mid-Tex Oil Co.'s No. 1 A. Pace (formerly Clopton), 258 ft. from N line and 330 ft. from most northerly E line of 40-ac. lease, Wesley Dikes Sur. ..... S.D. 2,665 ft.

Wilson & Stubbs' No. 1 L. Robert, 450 ft. from S and 150 ft. from W line of lease, J. B. Wolfin Sur. ..... Prepare to deepen; T.D. 3,600 ft.

DELTA COUNTY

Commerce Oil Co.'s No. 1 Ablowich, 150 ft. from S line and 776 ft. from W line of H. D. Jewett 52-ac. tract, E. Chick Sur. ..... S.D. 3,812 ft.

Joiner et al's No. 1 Blackwell, 800 ft. S and 150 ft. from E lines of 275-ac. tract, Dunnetelle Sur. ..... S.D. 3,355 ft.

ELLIS COUNTY

Armstrong's No. 1 Milton Cook, SE cor. of 50-ac. tract, S. Frederick Sur. ..... S.D. 375 ft. (corrected).

Armstrong Bros.' No. 1 Reeves ..... S.D. 300 ft.

Armstrong Bros.' No. 1 John Lee Winn, 1,650 ft. from E and 150 ft. from S of Orland, Orlo Wheeler Sur. .... S.D. 1,425 ft.

Clark Brooks' No. 1 Anderson, SE cor. of 3,900-ac. tract, 10 miles SW of Waxachachie, E. C. Branch Sur. .... S.D. 1,050 ft.

Paris Oil Co.'s No. 1 O. S. Bain, 1,500 ft. from S line and 300 ft. from W line of 60-ac. lease, R. M. Williams Sur. ..... S.D. 985 ft.

FRANKLIN COUNTY

Tom Harper's No. 1 fee, 150 ft. from N line and 200 ft. from E line of 116-ac. tr., W. M. Dawson Sur. .... Fishing for liner; T.D. 3,404 ft.

FREESTONE COUNTY

Clyde Creighton's No. 1 Holley Bros., 854 ft. from W line and center of N and S lines of lease, A.B.M. Sur. ..... S.D. 3,669 ft.

J. E. Hughes et al's No. 1 Oliver Burleson, 330 ft. from S and E lines of 233-ac. tract, Wiley Carter Sur., 3 miles SE of Streetman ..... Drlg. 3,633 ft.

GREGG COUNTY

Joe Anderson et al's No. 1 G. Shaw, center of 3-ac. lease, W. H. Dixon et al's No. 1 Clayborn, 400 ft. W of Angle and Kirkendall, I. Beaty Sur. ..... Swabbing; top sand 3,529 ft.; T.D. 3,584 ft.

M. G. Blalock's No. 1 State, center of Mineral Sur. ..... Drlg. 2,000 ft.

D. F. Buffington's No. 1 S. L. Dansby, 150 ft. from S line and 1,700 ft. from E line of 30-ac. lease, W. P. Chisum Sur. ..... Drlg. 3,689 ft.

J. W. Crockett's No. 1 B. D. Russell, NW offset to Schulman's No. 1 Doris, M. V. Winkle Sur. ..... Location.

Ray Dawson's No. 1 Mitchell, center of 2.1-ac. tract, M. V. Winkle Sur. ..... Spudded.

Delta Drilling Co.'s No. 1 L. D. Crim, 300 ft. S and 150 ft. E of SW cor. of Magnolia's Hale lease, M. V. Winkle Sur. ..... Drlg. 2,125 ft.

Joe Edgar et al's No. 2 Stinchcomb, 79 ft. N and 36.4 ft. W of most northerly SW cor. of Stanolind's Key lease, W. H. Hart Sur. ..... Moving in.

Faith Oil Co.'s No. 3 Barrett, 259 ft. N and 258 ft. E of SE cor. of Stanolind's Flewellen "A" lease, B. W. Witcher Sur. ..... Derrick.

Foundation Oil Co.'s No. 2 L. Willis, 150 ft. from S line and 315 ft. from E line of 13.5-ac. lease, G. W. Hooper Sur. ..... Drlg. 1,500 ft.

Lewis Godlin's No. 1 E. L. Walker, 330 ft. N of road, 330 ft. from E line of 80.2-ac. tract, M. Dillard Sur. .... Derrick.

Groveman and Dorian's No. 2 State, center of Mineral Sur. ..... Skid rig.

Guinn Petroleum Co.'s No. 1 J. S. and F. Elder, 200 ft. NE of Solar's No. 1 Elder, and 450 ft. SE of Martin's No. 1 Elder, M. V. Winkle Sur. ..... Derrick.

A. R. Hancock's No. 2 L. H. Brawley, 550 ft. E of No. 1 P. McAnnelly Sur. ..... Top Pecan Gap 2,390 ft.; T.D. 2,470 ft.

Humble Oil & Refining Co.'s No. 3 H. Castleberry, 135 ft. from S line and 330 ft. from W line of lease, B. N. Hampton Sur. ..... Moving in.

Humble Oil & Refining Co.'s No. 3 Janny Watson, 330 ft. from N and W lines of 35-ac. lease, T. Allen Sur. ..... Spudding.

Jones and O'Brien's No. 2 J. Prothro, 500 ft. W of No. 1 and center of N and S lines, J. Blair Sur. .... Drlg. 800 ft.

J. J. Jordan's No. 1 E. L. Walker, 660 ft. W of SE cor. of lease and 155 ft. from S line and 155 ft. from river, E. A. Lambert Sur. ..... Top sand 3,583 ft.; base 3,590 ft.; bailing; T.D. 3,605 ft.

S. H. Killingsworth's No. 2 State, 160 ft. from S line and center of E and W lines of lease, Mineral Sur. ..... Drlg. 2,660 ft.
Kinnebrew and Simpson's No. 2 R. B. Walls, center of E and W lines of lease and N offset to The Texas Company's No. 6 Walls ..... Derrick.
Edwin Lacy's No. 2 fee, center of 1¼-ac. tract, M. V. Winkle Sur. ..... Location.
J. M. Lapin's No. 1 fee, 437 ft. S and 224 ft. E of NE cor. of Humble's Knowles lease in 1.09-ac. tract, M. V. Winkle Sur. ..... Location.
Lee Bros.' No. 1 Sam Kay, 100 ft. NE of McCormick's No. 1 Kay and 1,165 ft. N and 150 ft. E of SW cor. of survey, L. J. Rigsby Sur. ..... Fishing for drill stem; T.D. 1,-050 ft.
Magnolia Petroleum Co.'s No. 1 Ciola Wells, 330 ft. from N line and 187 ft. from W and E lines of 12.7-ac. lease, L. B. Outlaw Sur. ..... Location.
H. H. LeMasters' No. 2 W. T. Thompson, 90 ft. from S line and 70 ft. from W line of Blk. No. 151, M. V. Winkle Sur. ..... Top Austin chalk 3,402 ft.; T.D. 3,448 ft.
Luttes et al's No. 1 Register, 330 ft. from S line and center of E and W lines of 13-ac. lease, G. F. Penn Sur. ..... Pecan Gap 2,665-3,065 ft.; T.D. 3,-194 ft.
Madalyn Oil Co.'s No. 1 J. V. Rossen, 550 ft. N and S and 100 ft. E and W of tract, T. Johnson Sur. ..... Waiting on cmt. to set 105 ft.
Magnolia Petroleum Co.'s No. 2 H. P. Hale, 330 ft. from W line of 50-ac. tract and 660 ft. S of No. 1, Tract No. 1, M. V. Winkle Sur. ..... Top sand 3,538 ft.; coring 3,551 ft.
Magnolia Petroleum Co.'s No. 1 E. Prothro, center of 5-ac. tract, J. T. McDaniels Sur. ..... Top Austin chalk 3,580 ft.; T.D. 3,625 ft.
Moore et al's No. 1 Crim, 100 ft. S of Vance & Fagin's No. 1 Crim, M. V. Winkle Sur. ..... Derrick.
Mullendore and Berry's No. 2 G. Davis, 330 ft. from S line and center of E and W lines of 10-ac. tract, W. P. Chisum Sur. ..... Skidded derrick 34 ft. S; set csg. 105 ft.
Newman et al's No. 2 O. Prothro, S offset to Iotex' No. 1 J. A. Knowles, J. Blair Sur. ..... Drlg. 3,235 ft.
George Pendegrast's No. 1 R. Lacy, center of 2.25-ac. tract, M. V. Winkle Sur. ..... Rig up.
Pierce and Moore's No. 1 J. S. and F. Elder, center of 1-ac. tract and lease, M. V. Winkle Sur. ..... Waiting on cmt. to set; T.D. 3,-558 ft.
Rancho Oil Co.'s No. 2 J. M. Wheeler, E offset to Pelphrey Bros.' No. 1 Wheeler, D. Ferguson Sur. .... Rig up.
Rhodes Drilling Co.'s No. 2 Sabine River, Tract No. 4, 309 ft. NW of The Texas Co.'s No. 3 Cole ..... Waiting on cmt. to set; T.D. 3,-551 ft.
Roeser & Pendleton's No. 2 S. D. Smith, 290 ft. from S line and 330 ft. from E line of lease, W. H. Castleberry Sur. ..... Derrick.
Ruston Drilling Co.'s No. 2 Sabine River, Tract No. 3, 660 ft. W of No. 1 ..... Running liner; T.D. 3,560 ft.
A. Snyder's No. 1 H. Adkins, 1,800 ft. from S line and center of a tract being N of S line of 5.37 acres of 9.37-ac. tract, Lot No. 2, D. Dainwood Sur. ..... Running csg.; T.D. 3,630 ft.
South Gulf Prod. Co.'s No. 1 Cemetery, 225 ft. NW of Barnsdall's No. 1 McGrede, on one-half acre lease, D. Sanches Sur. ..... Temp. abnd. 200 ft.
J. B. Sowell's No. 2 W. P. Luce, 378 ft. W of No. 1, E. L. Walker Sur. ..... Derrick.
Sun Oil Co.'s No. 3 W. L. Fuller, 359 ft. from W line of lease and 660 ft. S of No. 1, D. Sanches Sur. .... Top Austin chalk 3,592 ft.; T.D. 3,612 ft.
W. C. Turnbow's No. 2 McKinley, 125 ft. N and 420 ft. E of NE cor. of Yount Lee's Harley lease, D. Sanches Sur. ..... Derrick.
Universal Oil & Gas Co.'s No. 2 Adkins, 750 ft. S of No. 1, D. Dainwood Sur. ..... Rig up.

HENDERSON COUNTY

B. L. Green et al's No. 1 M. H. Gussett (old well drilled deeper), 150 ft. from N line and 1,000 ft. from W line of 105.5-ac. tract, 3 miles SW of Mabank, L. D. Stover Sur. ..... S.D. 3,338 ft.
Dr. J. T. Kennon et al's No. 1 Rowe & Baker, 1,320 ft. from N line and 150 ft. from W line of survey and tract, Josiah T. Childress Sur. ..... S.D. 920 ft.
H. H. Meyer's No. 1 M. E. Olson, 2 miles S of Brownsboro tract in NW cor. of survey, George Wilson Sur. ..... T.D. 3,719 ft.; steel line measurements.

HILL COUNTY

T. J. Spikes' No. 1 M. H. Davis, 150 ft. from S and E lines of 55-ac. tract, H. R. Alexander Sur. ..... Running liner 1,550 ft.

HOPKINS COUNTY

Burgess and Sinson's No. 1 First Natl. Bank, 470 ft. N and W of SE cor. D. Buie Sur., but located in the H.E.P.&P.R.R. Sur. ..... S.D. 1,190 ft.
Roark et al's No. 1 Taylor, 220 ft. from N and W lines of 80-ac. tract, in the John Polk Sur. ..... S.D. 500 ft.

HUNT COUNTY

A. Kelsey et al's No. 1 W. R. Berry, 450 ft. from S line and 300 ft. from E line of 139-ac. tract, J. Roads Sur. ..... Location.

KAUFMAN COUNTY

P. L. Meader's No. 1 T. C. Coleman, 673 ft. from S line and 460 ft. from W line of 259-ac. tract, W. G. Gibbard Sur. ..... Drlg. 1,700 ft.
T. L. Wynn et al's No. 1 J. A. Nash, 2,800 varas from NW line and 2,550 varas from NE line of survey, Trevins Sur. ..... Drlg. 350 ft.

LAMAR COUNTY

Doyle and Jondeau's No. 1 Martin, 990 ft. from N line and 330 ft. from E line of tract, Joseph Deck Sur. ..... Rig up; T.D. 3,446 ft.

LEON COUNTY

Alladay et al's No. 1 W. R. Thompson, 330 ft. from N line of survey and 330 ft. from E line of 98-ac. tract, N. M. Allen Sur. ..... S.D. 3,170 ft.
Shell-Penn & Black's No. 1 W. M. Phillips ..... Drill stem test 5,953-98 ft.; showed 8 joints of mud; drlg. 6,015 ft.

LIMESTONE COUNTY

Miller Drilling Co. and Joiner's No. 1 J. A. Stephenson, 400 ft. from S line and 300 ft. from E line of lease, one-fourth mile SE of Koase, Charles Welch Sur. .... S.D. 3,110 ft.

MORRIS COUNTY

Grover Hart's No. 1 Walcott and Lott, 250 ft. from N line and 330 ft. from E line of survey, 3 miles S of Carson, B. A. Russell Sur. ..... Drlg. 1,280 ft.
Joiner & Harris Drilling Co.'s No. 1 Clayton Brown, 1,625 ft. N. of most easterly SW cor. of survey, William M. Coffey Sur. ..... Derrick.
Leonard's (Tucker-Fullwood) No. 1 P. M. Staggers, 450 ft. from N line and 150 ft. from E line of 65-5-ac. tract, J. D. Nelson Sur. ..... Cleaning out; T.D. 3,672 ft.

POLK COUNTY

Cannon et al's No. 1 Roberts, 10 miles N of Livinston, Romera Sur. ..... Rig up and shut down.

RED RIVER COUNTY

Concord Oil Co.'s No. 1 J. R. Dallahunty, 500 ft. from N of Isaac Moore Sur. and 200 ft. E of E line of Robert Glass Sur. ..... Drlg. 2,720 ft.
L. G. Priest's No. 1 R. W. Peck, 900 ft. N and 500 ft. S of southerly SE cor. of 220-ac. tract, A. Wagley Sur. ..... Derrick material.

ROCKWALL COUNTY

Bucanner Oil Co.'s No. 1 H. L. Lofland, center of 69-ac. tract in W. M. Bird Sur. ..... Set 10-in. csg. 130 ft.

ROBERTSON COUNTY

Everts Drilling Co.'s No. 1 Cook ..... Drlg. 1,420 ft.

RUSK COUNTY

Acme Oil Co.'s No. 1 G. Bean, located in a 2-ac. tract, J. Lewis Sur. ..... Top Austin chalk 3,460 ft.; T.D. 3,560 ft.
T. C. Adams' No. 1 N. L. Marwell, 540 ft. N and 330 ft. E of NE cor. of Arksnasa Marwell tract on 19.77-ac. lease, T. H. Smith Sur. ..... Drlg. 2,530 ft.
Barnsdall Oil Co.'s No. 3 Gill, 302 ft. from N line and 330 ft. from W line of lease, R. W. Smith Sur. ..... Waiting on cmt. to set; T.D. 3,-621 ft.
Big Indian Oil Co.'s No. 1 Joe Lee, 172 ft. from S line and 990 ft. from W line of 34-ac. lease, Peter Tipps Sur. ..... Cored sand 3,646 ft.; testing.
P. D. Bowlen's No. 1 N. L. Marvill, 20 ft. from N and S lines and 1,050 ft. from E and W lines of tract, M. J. Pru Sur. ..... Waiting on cmt. to set 3,647 ft.
A. P. Cary's No. 1 Redwine, 150 ft. from N and W lines of Lot No. 7 on 5-ac. lease, Juan Ximenes Sur. ..... Bldg. derrick.
T. E. Castle's No. 1 R. H. Gary estate, 3,960 ft. from N line and 5,280 ft. from W line of survey, 10 miles S of Henderson, A. Latham Sur. ..... S.D. 3,812 ft.
Daniels and Scott's No. 1 J. R. Irion, W offset to George Pipes' No. 1 Irion, John Womack Sur. ..... Drlg. 3,675 ft.
Gant and Garwin's No. 1 Jerry Simmons, 330 ft. from N and W lines of 52.5-ac. lease, M. V. Pena Sur. .... Top sand 3,517 ft.; T.D. 3,518 ft.
Gulf Production Co.'s No. 2 O. R. Baton, 703 ft. along E line of lease from NE cor. of same and 403 ft. W at right angles, Mary Cogswell Sur. ..... Derrick.
Harris and Russell's No. 1 T. W. Harris, 330 ft. from S line and 660 ft. from W line of most southerly SW cor. of 160-ac. tract, 3 miles SW of Henderson, W. G. Davis Sur. ..... Derrick.
Hasting and Dodson's No. 1 E. B. S. Florey, 257 ft. from S line and 287 ft. from E line of 25-ac. lease, P. W. Holmes Sur. ..... Fishing; T.D. 3,670 ft.
Hathaway et al's No. 1 Gray, J. M. McLain Sur. ..... S.D. 3,905 ft.
H. B. W. Oil Co.'s No. 1 Redwine, 330 ft. from N and W lines of 63-ac. lease, Juan Ximenes Sur. ..... Bldg. derrick.
Humble Oil & Refining Co.'s No. 1 C. H. Hedge, 330 ft. from S and W lines of 103-ac. lease, J. C. Barnett Sur. ..... Derrick.
Humble Oil & Refining Co.'s No. 1 M. A. Neal, 234 ft. from N line and 497 ft. from W line of 64-ac. lease, T. H. Smith Sur. ..... Waiting on cmt. to set 3,752 ft.
Iotex Oil Co.'s No. 3 Tom Beall, W offset to Ward Oil Co.'s No. 3 Beall, P. W. Holmes Sur. ..... Derrick.
Iowa-Payne Oil Co.'s No. 1 W. A. Frederick, 150 ft. from E line of lease and 330 ft. W of Smith & Sikes' No. 1 Frederick, I. G. Parker Sur. ..... Rig up.
J. Jeagen's No. 1 Needham, 330 ft. from N line of lease and 330 ft. from NE and 400 ft. from SE of survey, J. H. Chambers Sur. ..... S.D. 1,414 ft.
Killum and Gibbs' No. 1 Bradford, SW offset to Hunt's No. 2-A Bradford and 150 ft. S of road, Juan Ximenes Sur. ..... Top sand 3,598 ft.; T.D. 3,610 ft.; waiting on standard rig.
Kimble & Acre's No. 1 Frederick, 150 ft. from S line and center of E and W lines of 10-ac. lease, Juan Ximenes Sur. ..... Derrick.
Lucy Petroleum Co.'s No. 2 Gill, 330 ft. from S and W lines of lease, W. A. Elliott Sur. ..... Drlg. 2,500 ft.
Luling Oil & Gas Co.'s No. 2 Barton, 135 ft. from N and S lines and 160 ft. from E and W lines of lease, McCabe Sur. ..... Waiting on cmt. to set; T.D. 3,-695 ft.
C. H. Lyons' No. 2 Moore, 660 ft. E of No. 1 and center of N and S lines of lease, L. B. Pena Sur. ..... Top Pecan Gap 2,590 ft.; drlg. 2,-595 ft.
Marr Drilling Co.'s No. 2 John Rettic, 330 ft. from N and W lines of 180.56-ac. tract, J. H. Sparks Sur. .... Drlg. 2,605 ft.
John Menke's No. 1 C. F. Bradbury, 330 ft. from S and E lines of lease, W. R. Cooke Sur. ..... Swabbing; T.D. 3,660 ft.
R. S. Monroe's No. 1 Daisy Bradford, 330 ft. N and E of NE cor. of Blk. No. 8 of Hunt's Bradford lease, Juan Ximenes Sur. ..... T.D. 3,609 ft.; waiting on cmt. to set.
Overton Refining's No. 2 Maxwell, 70 ft. S of J. E. Oliver's No. 1 G. Pool, F. Cordova Sur. ..... Rig up.
Paulett et al's No. 1 Ed Sparks, 350 ft. from E. 150 ft. from S of survey, L. C. Riggs Sur. ..... S.D. 1,465 ft.
Ross Seward's No. 1 Burton, J. J. Y'Barbo Sur. ..... T.D. 3,387 ft.
Fred Shields and Florence Oil Co.'s No. 1 R. L. Buckner, 330 ft. from N and W lines of 330-ac. tract and survey, John E. Davis Sur. ..... Coring 4,255 ft.
Sibling and Williams' No. 1 Goforth, 212 ft. from N line and 230 ft. from E line of tract, being on E 18.75-ac. tract, E. Thompson Sur. ..... Top Austin chalk 3,605 ft.; waiting on cmt. to set; T.D. 3,-770 ft.
Smith and Sikes' No. 1 Frederick, 150 ft. S of SE cor. of E. D. Oil Co.'s Alford lease, I. G. Parker Sur. ..... Waiting on standard rig; T.D. 3,-685 ft.
Stanolind Oil & Gas Co.'s No. 1 J. W. Ashby, 330 ft. from N and W lines of 107.6-ac. tract, Milton Walker Sur. ..... Top sand 3,688 ft.; base 3,718 ft.; cored 3,729-35 ft.; ran drill stem test 370 ft. of fluid in 1 hour; 450 ft. was salt water; coring 3,765 ft.
The Texas Company's No. 2 G. G. Turner, 878 ft. from S line and 195 ft. from W line of lease, T. H. Smith Sur. ..... Derrick.
Tidal Oil Co.'s No. O. Whittington, 330 ft. from N line and 165 ft. from E line of lease, John Darley Sur. ..... Waiting on cmt. to set; T.D. 3,-560 ft.

SMITH COUNTY

Amalgamated Oil Co.'s No. 6 Cook, 330 ft. from N line of lease and midway between Nos. 3 and 4, J. Jordan Sur. ..... Drlg. 3,580 ft.
Boucher-Owen and McCulloch's No. 1 Beulah Means, 2,775 ft. from S line and 330 ft. from E line of lease, E. Daniels Sur. ..... S.D. 1,300 ft.
Cockburn and Hooker's No. 2 Lula Jackson, 330 ft. from S and E lines of 76-ac. lease, E. Daniels Sur. .... Rig up and S.D.
Golden Eagle Oil Co.'s No. 1 T. B. Collier, 137 ft. from S line and 150 ft. from E line of lease, J. Jordan Sur. ..... Derrick down.
Golden Eagle Oil Co.'s No. 1 R. E. Moore, 330 ft. from N and E lines of 8-ac. lease, Juan Vargus Sur. ..... Derrick.
W. T. Graham's No. 1 Cooke, 400 ft. N and 36 ft. W of SW cor. of Sinclair Prairie's Dora Wright 163.2-ac. tract, Juan Vargas Sur. ..... Derrick.
Gulf Production Co.'s No. 7 Jack Wiley, 1,016 ft. S along W line of lease from NW cor. and 217 ft. E at right angles, J. Jordan Sur. ..... Drlg. 3,765 ft.
Hooper et al's No. 1 Lula Jackson, 330 ft. S and 330 ft. E of most northerly SW cor. of Monroe Shell Robinson lease, E. Daniels Sur. ..... S.D. 3,315 ft.
Johnston and Owens, trustee's No. 2 Wolford, 330 ft. from N line and 104 ft. from W and E lines of lease, J. Jordan Sur. ..... Spudding.
Joiner et al's No. 1 C. S. Jackson ..... Pulling pipe; prepare to abnd; T. D. 4,045 ft.

B. K. Appleman Receives UNITED STATES PATENT on his GUMBO BIT

SIX VALUABLE CLAIMS are contained in the U. S. Patent No. 1,882,268, issued October 11, 1932.

THE MANY FRIENDS made by the thousands of Appleman Gumbo Bits which have been put into service are sending in their congratulations on hearing this good news.

THESE FRIENDS ARE PROUD that the advanced principles of the Appleman Gumbo Bit have won the protection they deserve.

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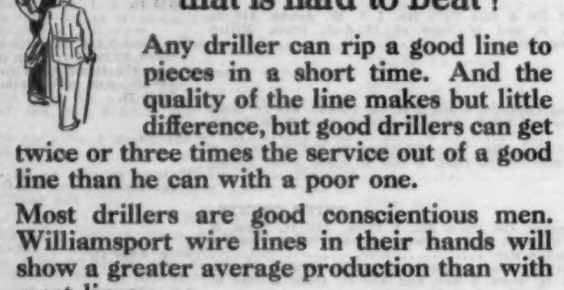
For their protection, so that they will not be tied up with bits illegally manufactured and sold to them, I trust that oil operators will use care in procuring Appleman Bits from the following authorized sources: *The Beaumont Iron Works* and *The Gulf Coast Machine and Supply Company at Beaumont, Texas* . . . Rental Bits can be obtained from *The Authorized Appleman Bit and Service Company, Inc., at Henderson, Texas,* and from *Howell Machine Works at Pettus, Texas* . . . or you may place your order through your supply house.

THANKS FOR YOUR SUPPORT AND HERE'S FOR A GREATER FUTURE

B. K. APPLEMAN

BEAUMONT, TEXAS



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Alex McCutchin's No. 1 Jessie Cole, 108 ft. from S line and 110 ft. from E line of 1.27-ac. lease, J. Jordan Sur. ..... Top Austin chalk 3,623 ft.; T.D. 3,686 ft.

McRabie et al's No. 1 C. P. Hamilton, 330 ft. from S and E lines of 255-ac. tract, Jackson Rector Sur. .. Rig up and S.D.

Mid-Kansas Oil & Gas Co.'s No. 8 J. H. Sharp, 316 ft. from S line and 4,603 ft. from E line of lease, M. D. L. S. Coy Sur. ..... Derrick.

Mundt et al's No. 1 W. R. Murray, 330 ft. from S and E lines of lease, 5 miles SE of Tyler, Marshall Wynn Sur. ..... Fishing for drill stem; T.D. 4,600 ft.

Sinclair Prairie Oil Co.'s No. 6 Patterson, 330 ft. from N and W lines of lease, J. Vargas Sur. ..... Waiting on cmt. to set; T.D. 3,519 ft.

Sun Oil Co.'s No. 13 O. W. Knight, between No. 4 and No. 12 and 831 ft. W of No. 4, D. Collins Sur. ..... Top Austin chalk 3,460 ft.

Sun Oil Co.'s No. 2 Hudnott and Melton, 330 ft. from N and E lines of 137.5-ac. lease, M. D. L. S. Coy Sur. ..... Derrick.

The Texas Company's No. 7 M. Blackwell, 1,160 ft. from N line and 330 ft. from W line of lease, J. Jordan Sur. ..... Derrick.

Ed Wallace et al's No. 1 Jessie Cole, 150 ft. from S line of lease and due W offset to Smith's No. 1 Cole on 10-ac. lease, J. Jordan Sur. ..... Top Austin chalk 3,623 ft.; S.D. 3,700 ft.

Weaver Crim Oil Co.'s No. 2 T. Stone fee, 330 ft. from S line and E offset to Monroe's No. 1 Robinson, D. Shaw Sur. ..... Testing; T.D. 3,746 ft.

TITUS COUNTY

Perry V. Cook's No. 1 M. C. Rogers, center of SW of Moore Sur. ..... T.D. 4,212 ft.

UPSHUR COUNTY

Conservative Oil Co.'s No. 2 Eva O'Byrne, 330 ft. from S and E lines of lease, David Ferguson Sur. ..... Bldg. derrick.

Cranfill & Reynolds' No. 1 H. M. and B. B. Berry, 325 ft. from N line and 2,000 ft. from W line of survey, J. P. Hutchinson Sur. ..... Drlg. 3,460 ft.

Creighton Drilling Co.'s No. 2 Hargraves, 330 ft. from S line of lease and 660 ft. W of No. 1, M. Mann Sur. ..... Set surface csg.

Everetts Oil Co.'s No. 4 A. J. Sanders, 330 ft. from S and W lines of lease, T. Allen Sur. ..... Drlg. 2,750 ft.

Heydrick and Camp Drilling Co.'s No. 1 Shelton, center of 2½-ac. tract, William King Sur. ..... Swabbing; T.D. 3,735 ft.

Pat Hudson et al's No. 1 D. F. Smith, 330 ft. out of SE cor. of W 100 acres of the N 200 acres of the 272-ac. lease, 3 miles E and 1½ miles N of Cranfill & Reynolds' No. 1 Rash, John Denson Sur. ..... Waiting orders 3,710 ft.

Lynch and McQuiag's No. 1 L. T. Mackey, 330 ft. from S line of road and 230 ft. from E line of road, Sarah Harrell Sur. ..... Drlg. 1,800 ft.

Maddox Development Co.'s No. 1 D. A. Fleet, 130 ft. from N and E lines of survey, I. N. Stephens Sur. .... Washing; T.D. 3,682 ft.

Magnolia Petroleum Co.'s No. 8 O. F. Smith, 330 ft. from N line of lease and 330 ft. NW of No. 5 and 955 ft. from No. 6, H. Edwards Sur. ..... Location.

G. P. Mitcham's No. 2 Jim Bland, 330 ft. from S and W lines of 15-ac. lease, G. W. Hooper Sur. ..... Rig up.

B. F. Phillips' No. 3 E. H. Bramley, 330 ft. from S line of lease and 660 ft. W of No. 2, William King Sur. ..... Rig up.

Rodgers Bros.' No. 2 E. H. Bramley, 330 ft. from S line and 270 ft. from E line of lease, McKinley & Williams Sur. ..... Top sand 3,636 ft.

Shell Petroleum Corp.'s No. 13 C. C. Landers, 555 ft. from N line of lease and 667 ft. from No. 1 and 668 ft. from No. 11, G. W. Hooper Sur. ..... Drlg. 1,200 ft.

Stroube and Stroube's No. 2 Mackey, N offset to Mabee's No. 3 Whitehurst, D. Ferguson Sur. ..... Waiting on cmt. to set; T.D. 3,583 ft.

Tucker and Van Flech's No. 1 S. J. Mangham, 1,320 ft. E and 640 ft. S of SW cor. of M. Ward survey, 2 miles E of Gilmer, J. J. Hooper Sur. ..... Drlg. 3,400 ft.

Twin Oil Co.'s No. 2 C. J. Mackey, 330 ft. from S line of lease and 660 ft. W of No. 1, J. M. Pineda Sur. ..... S.D. 300 ft.

R. H. Vice et al's No. 2 L. Graves, 330 ft. from W line of lease and 660 ft. N of No. 1, M. Irwin Sur. .. Rig up.

Wadley and Evans' No. 1 W. S. Jones, 330 ft. from S and E lines of 100-ac. lease, James M. Dunn Sur. ... Temp. abnd. 3,690 ft.; moving derrick to north.

Watson's (formerly Kinsey) No. 1 D. F. Smith, 466 ft. from S line and 1,165 ft. from E line of 266-ac. tract, J. R. Davis Sur. ..... S.D. 1,856 ft.

J. C. Werby and Refugio's No. 1 Ben H. Reed, 262 ft. from S line and 845 ft. from E line of 189-ac. tract.. Drlg. 3,535 ft.

Williams and McConnell's No. 1 Williams, center of 6⅝-ac. lease, McKinley & Williams Sur. ..... S.D. 450 ft.

VAN ZANDT COUNTY

Barton et al's No. 1 C. L. Hubbard, 600 ft. out of NE cor. of Hubbard 225-ac. tract, 3½ miles S of Canton, M. J. De Cadena Sur. ..... S.D. 3,300 ft.

Kelly O. & G. Co.'s No. 1 Lemsford, center of Lemsford tract, John Conner Sur. ..... S.D. 2,300 ft.

Killum & Chisum's No. 1 N. E. Clark, 165 ft. out of most westerly NW cor. of tract, 2 miles S of Van, Jackson Thomas Sur. ..... S.D. 3,011 ft.

Lyman et al's No. 1 J. C. Stewart, 150 ft. from N line and 650 ft. from W line of 90-ac. tract, A. McPhail Sur. ..... T.D. 2,781 ft.

Pure Oil Co.'s No. 3 M. Elliott, 200 ft. E of W line and 225 ft. S of N line of lease, A. H. Wiley Sur. .... Location.

Pure Oil Co.'s No. 6 R. E. Cade, 225 ft. W of E line and 225 ft. N of S line of lease, A. McPhail Sur. .... Cmt. setting 2,774 ft.

Pure Oil Co.'s No. 2 R. A. Enas, 150 ft. S of N line and 225 ft. E of W line of lease, Jackson Thomas Sur. .... Cmt. setting 2,963 ft.

Pure Oil Co.'s No. 2 Mrs. J. E. Cumbie, 250 ft. N of S line and 325 ft. W of E line, John Walling Sur. ... Cmt. setting 308 ft.

A. C. Rowan's No. 1 W. E. Price, 150 ft. from N line and 150 ft. from W line of 23-ac. tract, John Walling Sur. ..... S.D. 2,942 ft.

Roy Stumpff's No. 1 M. L. Riggs, 150 ft. from E line and 50 ft. from S line of tract No. 2 and 330 ft. from E line of lease, 4 miles NE of Van, William Daniel Sur. ..... Rig up and S.D.

The Texas Company's No. 5 R. V. White, 250 ft. S of N line and 200 ft. E of W line of 15.5-ac. tract in Nacogdoches County School Land Sur. ..... Rig up.

Van Oil Association's No. 1 Tankersley, 200 ft. from E and 1,000 ft. from S of farm, L. Landers Sur. ..... T.D. 2,850 ft.

C. O. Weir's No. 1 W. B. Tunnell, 150 ft. from N and W lines of lease, A. H. Wiley Sur. ..... Cored 3,000-03 ft.

WOOD COUNTY

De Canther's No. 1 N. L. McLain, 350 ft. from N line and 642 ft. from E line of tract, Sam Brooks Sur. .... S.D. 3,325 ft.

F. B. Parriott's No. 1 John G. Harvey, 200 ft. from N line and 2,801 ft. from W line of survey, 6 miles E of Quitman, Meredith H. Ussery Sur. ..... Drlg. 2,175 ft.

Sinclair Prairie Oil Co.'s No. 1 M. R. Sayner, 330 ft. from N and W lines of Blk. No. 19, one-half mile N of Elberta, J. M. Chandler Sur. ..... Derrick.

W. B. Salisbury's No. 1 T. H. Peters, 660 ft. from S line and 300 ft. from E line of 320-ac. tract and survey, 4 miles E of Mineola, W. B. McNutt Sur. .... S.D. 1,850 ft.

Talko Oil Co.'s No. 1 G. T. Ross, B. L. Smith Sur. ..... Fishing 3,840 ft.

Wood County Dev. Co.'s No. 1 Davis, approximately 180 ft. from S line of 160-ac. tract and 2½ miles S of Kantes in Sarah McDonald Sur. ..... Drlg. 3,950 ft.

Holdenville Field Development Work, Hughes County, Oklahoma, Spreads to Six Sections

By W. A. SPINNEY
Staff Correspondent, Oklahoma Fields

Development work in the Holdenville Field in Hughes County now includes operations in Sections 9, 10, 11, 14, 15 and 16, in Township 7, Range 8. It is estimated to cover 3,800 acres. There are 19 completed oil wells in the pool producing from the Booch and Calvin sands. Fourteen wells producing from the Booch sand, approximately 2,800 feet deep, are estimated to have a potential of 8,200 bbls. daily, but the pipe line outlet is only 500 bbls. per day. Each well is permitted to produce 20 bbls. daily and 3 per cent of its potential. The allowed production will be reduced as new wells are completed in the field. The Calvin sand wells, approximately 1,200 feet in depth, are estimated to have a potential of 450 bbls. per day but have an outlet for approximately 150 bbls. per day, which is shipped out in tank cars and is being sold for fuel oil. The gravity of the Calvin sand oil is around 27° A.P.I. and the gravity of the Booch sand oil is around 37° A.P.I.

Up to the present time no dry holes have been completed in the Booch sand although some Calvin sand dry holes have been drilled. The field is being developed by independent oil operators and new work is being delayed by the lack of a pipe line demand for the oil. The Holdenville area is attractive to operators because of the shallow producing horizons.

The production from the Calvin sand is being pumped eight hours daily while practically all the wells producing from the Booch sand are flowing.

The recent development of the Holdenville area is considered to bear relationship to the old gas wells that have been producing for years from the Booch sand. Some of these gas wells were showing oil and this led to the attempts of operators to find the part of the structure that would produce oil.

The Holdenville Field in Hughes County has become the most active field in the State, where two extensions are expected to be completed during the early part of the week, according to the present indications of wells now drilling.

Felmlee and others' No. 1 Chupco, NW cor. SW NW Section 15-7-8, Hughes County, in the West Holdenville Pool, found a showing of oil and gas in the Booch sand. If this well makes a producer it will extend production in the area a quarter of a mile to the south. In the Fish Pool of the same township, Winona Oil Co. and others' No. 1 Harjo, SE cor. NW NW Section 29-7-8, is also expected to make a producer. It found a showing of oil at 2,710-40 feet and was drilling deeper at 2,800 feet and is believed to be running favorably on structure. This well will extend production in the Fish Pool, a quarter of a mile to the southeast.

Northwest of the Oklahoma City Field, the Carter Oil Co. and others' No. 1 Shawbell Community, C SW NE Section 1-12-4w, Oklahoma County, was drilling at 6,000 feet. The top of the checkerboard lime was reported to have been at 5,733 feet. It is believed to be lower structurally than producing wells in the Oklahoma City Field. At the time the well was started many expressed the opinion that it would furnish a link between the Oklahoma City Field and the wildcat well west of Edmond, Mid-Kansas Oil & Gas Co.'s No. 1 Messer, in Section 32-14-3w, which was completed two years ago and is still shut in.

Oklahoma production shows a decline of approximately 10,000 bbls. a day for the week ending November 19, compared to the previous week. The daily average for the seven days is estimatd at 387,450 bbls. Most of the decline was in the Oklahoma City Field.

Big Gasser in Tatums Pool

The first gas well found in the Tatums Pool is the Noble Drilling Co.'s No. 3 Tarhern, SE cor. NE NW, Section 31-1s-2w, Carter County. The well is estimated to be good for 20,000,000 feet of gas per day from sand at 2,165-2,220 feet, with the total depth 2,468 feet.

Other developments in the same pool include the announcement of two new locations, one of which will extend production to the northwest if it makes a commercial producer. Two other tests are in the completion stage.

The Samedan Oil Corp.'s No. 1 Gouin, NE cor. SW, Section 31-1s-2w, is rigging. G. L. Pace's No. 1 Lucas, NE cor. SE NW, Section 14-1s-3w, is a location northwest of the production in the field.

The Carter Oil Co.'s No. 2 Lynn, SW cor. NW NE, Section 31-1s-2w, is estimated at 50 bbls. daily on the pump. The oil was found in a series of sands at 2,068-2,383 feet.

Frank Lundy's No. 1 Majors, NE cor. SE SE, Section 25-1s-3w, which is located between the production in the old field and the extension area, has cemented the casing on top of a sand at 2,419 feet. The total depth of the well is 2,483 feet. The operators plan to drill out the cement plug in a few days.

The K. D. Oil Co.'s No. 2 D. C. Burton, NW cor. SE, Section 31-1s-2w, is a rig on the ground.

P. Turner and others' No. 1 Sparks-Carter, SW cor. NW, Section 13-1s-3w, three locations north of production in the Tatums Pool, has resumed operations after being shut down for water.

County Line Gassers

Two gas wells have been completed in the County Line Pool, which lies along the east line of Lincoln County and the west line of Creek County. The Elm Oil Co.'s No. 2 Strip, NE cor. SW, Section 1-15-6, Lincoln County, found the top of the Wilcox sand at 3,641 feet and after coring to a total depth of 3,695 feet found a saturated core and gas that was estimated at 3,000,000 feet a day. The casing was landed at 3,677 feet before drilling deeper. The other test, Magnolia Petroleum Co.'s No. 3 Wattee, Section 6-15-7, Creek County, is estimated at 50,000,000 feet a day from Wilcox sand at 3,582-3,651 feet.

Proration in Holdenville

Phillips Petroleum Co.'s No. 1 Richards, NE cor. SE, Section 35-7-4, pumped 218 bbls. of oil and 219 bbls. of water in 22 hours from the Simpson dolomite at a total depth of 4,255 feet.

Production has shown a rapid increase in the Holdenville area of Hughes County in the last few weeks and a program of curtailment was worked out during the past week with the purchasing companies which was effective November 15. The entire area has been limited to a maximum of 500 bbls. daily. There were 13 completed wells in the field, producing from the deep sand around 2,900 feet, with a combined potential of 8,000 bbls. daily, with more than a score of wells drilling in the field. A temporary curtailment was fixed at 3 per cent of the potential plus a daily allowable of 20 bbls. per well. The proration plan was effective November 15. As new wells are completed in the field the curtailment will be adjusted to limit the total to 500 bbls. a day.

"Shooting" Western Counties

It is reported that several seismograph and core drilling crews are working in eastern Beckham and Roger Mills Counties, on the west side of the State. There has been some leasing of lands in that territory during the year. The crews have been making their headquarters at Elk City. Rentals have been paid for the next year on the majority of this acreage although many attempts have been made to reduce the price to 50 cents per acre. Only a few deep tests have been drilled. The Ute Oil Co.'s well in Section 23-12-24w, is shut down at 5,150 feet, and Hivick and others' well in Section 4-11-26w, is shut down at 3,400 feet.

Pawnee Land Sale

Seven tracts totaling 720 acres were sold by the Pawnee Indian agency at Pawnee during the week. All of these tracts were located in Townships 22n and 23n, Range 1e, Noble County. The Shell Petroleum Corp. purchased the SW Section 10-22-1, G. C. Roughton, the SE Section 4-23-1, N half SW, Section 5-23-1, the W half NW Section 8-23-1, the NE NW Section 8-23-1, and the NE Section 8-23-1. A. C. Donahue the SE NW Section 8-23-1. A total of 27 tracts were offered but there were no bidders of the remainder of the tracts.

More Oil From Deeper Pay

The second deep sand producer to be completed in the old Roxana Pool, in Logan County, in the recently discovered pay below the Wilcox sand, was L. H. Wents Corp.'s No. 2 Williams, NW cor. NE, Section 31-19-4w, found the School Land sand at 6,178-81 feet. It made 980 bbls. of oil the first 24 hours. It will probably be drilled deeper into the sand and then shut in to 50 bbls. a day.

Other wells drilling deeper to the new horizon include the Shell Petroleum Corp.'s No. 6 Sebronek and the J. S. Cosden Oil Co.'s No. 1 Gardner. This is the only area in the State outside of the Oklahoma City Field having wells producing from this sand. The wells are classed as wildcats and under the state proration laws are only permitted to produce 50 bbls. of oil a day.

The recent extensions to the St. Louis Pool in Pottawatomie County have resulted in an increase in field work in that area. Practically all of the area is under lease and new tests are expected to be started as the result of the new wells.

Hilton Phillips and others' No. 1 Bradshaw, SW cor. SE, Section 21-7-4, which is taking a 10-day potential gauge, has been declining on account of water. The first day's gauge was reported at 2,687 bbls. and it declined to 596 bbls., by swabbing, after the appearance of water. The production is from the Simpson dolomite at 4,155-58 feet. The same operators made a location for No. 2 Bradshaw, SE cor. SW SE, Section 21-7-4.

Other new locations include Prince Drilling Co.'s No. 1 Brandenberg, SW cor. NW, Section 21-7-4; Magnolia Petroleum Co.'s No. 1 Hines, SW cor. NE, Section 28-7-4, and the Sinclair Prairie Oil Co.'s No. 2 Deathridge, NE cor. NW, Section 28-7-4.

Phillips Oil Co.'s No. 1 Garrett, SE cor. NW, Section 28-7-4, is drilling in Viola lime at 4,103 feet where it swabbed 240 bbls. of oil in six hours. The owners expect to drill the test to the Simpson dolomite.

Smith & Garrett's No. 1 Hankins, SE

Wildcat Operations in Oklahoma

Northern Oklahoma

ALFALFA COUNTY

Company, farm and location—	Remarks:
Smith Brothers' No. 1 Forbes, SE cor. NW NW Sec. 13-27-11w	S.D. 1,232 ft.

ATOKA COUNTY

Barton's No. 4 Miller, SE NW SE SW Sec. 26-1-14	Drlg. 496 ft.
Hicks' No. 2 Morris, SE NE NW SE Sec. 5-1-15	Drlg. sand 69-155 ft; estimated 2 bbls; S.D. 215 ft.
Hick's No. 2 Morris, SE NE NW SE Sec. 5-1-15	S.D. 160 ft.
George's No. 1 Reddin, SW NE SW Sec. 19-1-15	S.D. 640 ft.

BECKHAM COUNTY

Pattel Royalty's No. 1 Goose Tree, SW SE SW SE Sec. 32-10-23w	S.D. 924 ft.
Mid-Texas Co.'s No. 1 Sidell, NE cor. SW SW Sec. 17-22-22w	S.D. 2,560 ft.
White et al's No. 1 Green, SW cor. Sec. 34-10-24w	S.D. 3,575 ft.

BLAINE COUNTY

Watonga Petroleum Co.'s No. 1 Masters, SW NW NW, Sec. 27-16-11w	S.D. 1,175 ft.

CADDO COUNTY

Abernathy & Brown's No. 2 Houston, Sec. 24-6-13w	S.D. 1,115 ft.

COAL COUNTY

Dodd & Burton's No. 1 Grigsby, NW SE NE Sec. 35-1-8	Drlg. 350 ft.
Funk & Russell's No. 1 Miller, SE NE Sec. 10-2-8	Drlg. 2,730 ft.

COMANCHE COUNTY

G. W. Stogner's No. 1 Doebel, C SW SW Sec. 3-3-9w	S.D. 1,450 ft.

CREEK COUNTY

O. O. Owen's No. 1 fee, NW cor. Sec. 23-15-7	S.D. 1,215 ft.
M. L. Jillson et al's No. 1 Starr, SE NW Sec. 18-15-8	Drlg. Wilcox 3,852-64 ft; est. 307 bbls.

CUSTER COUNTY

Miley Pet. Co.'s No. 1 Caldwell, NE Sec. 12-14-14w	Location.

ELLIS COUNTY

Algers Pet. Co.'s No. 1 Roper, C SE NW Sec. 21-20-24w	S.D. 50 ft.

GRADY COUNTY

English Drlg. Co.'s No. 1 Heenan-Coe, NE SE NE Sec. 32-3-7w	Show oil 3,255-87 ft.; to test; drlg. out cmt.; swbd. 3 bbls. per hr., est. at 50 bbls. daily; running tubing to pump 20 bbls. and drlg. deeper.

GARFIELD COUNTY

E. L. Love et al's No. 1 White, SE cor. NW Sec. 9-24-6w	S.D. 5,850 ft.

GREER COUNTY

French's No. 1 Murphy, SW NW Sec. 28-7-21w	S.D. 1,645 ft.

(Continued on Next Page)

cor. SW NW, Section 10-7-4, found a sand at 3,500-30 feet, total depth 3,538 feet, where it swabbed and flowed 80 bbls. of oil in two hours. It will be drilled deeper.

In the Oklahoma City Field

In the extreme south end of the Oklahoma City Field, the Indian Territory Illuminating Oil Co.'s No. 1 Wisel, SW cor. SE SE, Section 26-11-3w, flowed 1,850 bbls. of oil in 10 hours. The oil was found in the Wilcox sand at 6,480-6,512 feet. It was first tested from a total depth of 6,506 feet, where it swabbed and flowed only 189 bbls. of oil in 10 hours, and was then drilled deeper.

In the Oklahoma City Field Phillips Petroleum Co. announced two new locations in the southwest portion of the field. There have been few new locations made in this area during the last month. The locations are, No. 1 Beauchamp, E half NW SW SE, Section 22-11-3w, on Block 11, of Fletcher Heights, and No. 1 Holstein, W half NE SW SE, Section 22-11-3w, on Block 10 of Fletcher Heights.

The state school land commission is offering to lease for oil and gas purposes the W half SW, Section 36-13-4w. The bids for a lease will be recieved up to November 29. This tract of 80 acres is located to the north of the Carter Oil Co. and others' No. 1 Shawbell, a community wildcat, which was drilling around 5,700 feet on the last reports.

Phillips Petroleum Co. was moving a rig in for No. 2 Berg, NE cor. NW SW, Section 26-11-3w, in the south end of the field.

Interesting Wildcats

J. B. Nichols and others' No. 1 Rigney, NE cor. NW SE Section 12-5-9w, near the Cement Pool, in Caddo County, has resumed operations. Its present depth is 3,347 feet, but the well has been shut down for about two years and has caved badly. The 8-inch casing was landed at 2,989 feet, where it reported a showing of oil, gas and water. Originally the well was known as Rigney and others' No. 1 Rigney-Ryan. The present owners plan to drill the test to the Wilcox sand, if possible. The search for the Wilcox sand started when the Mid-Kansas Oil & Gas Co. and Ramsey Petroleum Co.'s No. 6 Culp, NW cor. NE Section 6-5-9w, was drilled to a total depth of 10,079 feet, about a year ago, without finding the Wilcox sand.

Other interesting wildcat tests in the State include the following: Ramsey Petroleum Co.'s No. 1 Duck Club, NW cor. NE Section 10-16-4w, Logan County, drilling at 5,485 feet, after finding the checkerboard lime at 5,198 feet. The Sovereign Oil Co.'s No. 1 Flowers, SW cor. SE SE Section 14-12-3, Lincoln County, drilling around 5,450 feet. The Amerada Petroleum Corp.'s No. 1 Laffoon, NE cor. SE NE Section 9-13-6, Lincoln County, fishing at 3,385 feet.

Some leasing is being done in Logan County where companies are seeking protection on checkerboard acreage, and others attempting to fill in blocks. Logan County leases went to the Barnsdall Oil Co., Frank Buttram, Margay Oil Co. and Ramsey Petroleum Co. In Lincoln County leases have recently been obtained by Sinclair Prairie Oil Co., W. O. Allen, W. C. McBride, Inc., The Texas Company, Gypsy Oil Co., Phillips Petroleum Co., Amerada Petroleum Corp., Magnolia Petroleum Co. and Twin State Oil Co. In Kingfisher County leases were assigned to the Gypsy Oil Co., The Texas Company, Sinclair Prairie Oil Co. and Ramsey Petroleum Co. In Pottawatomie County leases were taken by the Mid-Continent Petroleum Corp. and Gypsy Oil Co.

Atoka County

Croxton Oil & Gas Co.'s No. 1 Green, C NW NW Section 16-1s-14, is a machine. Same company's No. 1 Downing, C SE NE Section 17-1s-14, was dry and abandoned at 610 feet. Malarnee and others' No. 1 D.O.K. Land Co., C E half SE Section 35-1s-13, was completed for 3 bbls. from 545-610, and 680-700 feet. Same company's No. 3 D.O.K. Land Co., CWL E half SE Section 35-2s-13, was completed for 3 bbls. from 422-60 feet.

Carter County

Samedan Oil Co.'s No. 1 Graham, C NE SW Section 31-1s-2w, is a location.

Creek County

Gled Oil Co.'s No. 4 Knight, C SW NW Section 24-19-8, is a rig. Leathercock-Bankston's No. 1 Coonrod, SE cor. NE SE Section 3-19-9, is a rig. G. S. Voorhees' No. 1 Orcutt, NE cor. SE SE SW Section 28-19-13, was drilling at 200 feet. S. W. Anthony's No. 2 Warberg, SW cor. SE Section 4-16-12, was drilling at 300 feet. W. H. Atkinson's No. 1 Smith, SW cor. NE NE Section 33-19-8, was dry and abandoned at 3,304-40 feet. Johnson Oil & Refining Co.'s No. 1 Boyd, NW cor. NE SW Section 29-19-9, was completed for 150 bbls. from 2,155-2,201 feet. Whitten and others' No. 1 Ruffins, SE cor. NE Section 2-18-8, was shut down at 843 feet.

Hughes County

Inglehart and Skelly Oil Co.'s No. 1 Barnett, NE cor. SE SE Section 28-9-10, is a rig. J. E. Hall and others' No. 1 Chapman, SE cor. Section 10-7-8, is a machine. Manahan and others' No. 2 Tiger, SW cor. NW SW Section 10-7-8, is a rig. Robinson & Hicks' No. 1 Jacobs, NW cor. Section 15-7-8, is a rig. Same operators' No. 2 Jacobs, NE cor. NW NW Section 15-7-8, is a location. Same operators' No. 3 Jacobs, NE cor. NW NW Section 15-7-8, is a location.

Jefferson County

E. S. Bonner's No. 1 Burgess, NE cor. SE Section 12-5s-8w, was dry and abandoned at 750 feet.

Lincoln County

Pure Oil Co.'s No. 2 Unglesbee, SE cor. Section 12-15-6, is a location. Reserve Oil Co.'s No. 1 Wickham, SE cor. NE NE Section 11-15-6, was dry and abandoned at 3,773 feet.

Marshall County

J. Peacock's No. 1 Flynn, NW cor. SW SE Section 3-17-6, was completed for 50 bbls. a day from 827-37 feet.

Muskogee County

Beland Oil Co.'s No. 10 James, NW cor. SE SE Section 18-14-17, was dry and abandoned at 1,431 feet.

Osage County

Mohawk Oil Co.'s No. 2, NE cor. NW NW Section 10-26-9, is a machine. C. Moore and others' No. 48, SW cor. SE NW Section 12-21-8, was rigging up.

Okmulgee County

F. D. Misener's No. 5 Colbert (twin), in Section 14-14-14, is a machine. Dodge Brothers' No. 5 Colbert, SE cor. Section 11-15-14, was drilling at 300 feet. E. W. Wicks, No. 2 Lockett, NE cor. NW Section 2-13-12, an old well drilled deeper, was drilling at 300 feet.

Oklahoma County

Phillips Petroleum Co.'s No. 2 Berg, NE cor. NW SW Section 26-11-3w, is a location. Same company's No. 1 Owenby, NW cor. SE Section 22-11-3w, was completed from 6,474-6,565 feet for 1,185 bbls. in four hours.

Okfuskee County

Fleming and others' No. 3 Johnson, SE cor. SW SE SE Section 2-10-11, was drilling at 600 feet.

Pawnee County

Westfall Drilling Co. and others' No. 1 Schildberg, NW cor. SW NW Section 27-22-6, is a location. P. Adamson, Jr.'s No. 2 People, CSL NW SW Section 3-20-8, is a machine. J. Shetts' No. 1 Flowers, NW cor. SE Section 7-20-8, was dry and abandoned at 2,682 feet. H. D. Handley's No. 2 Baker, SW cor. NW SE Section 35-20-9, was completed for 96 bbls. from 2,026-49 feet.

Pottawatomie County

Prince Drilling Co.'s No. 1 Brandenberg, NE cor. SW NW Section 21-7-4, is a location. Magnolia Petroleum Co.'s No. 1 Brister, SW cor. NE Section 21-7-4, is a location. Sinclair Prairie Oil Co.'s No. 2 Dethridge, NE cor. NW Section 21-7-4, is a rig. Gypsy Oil Co.'s No. 1 Willie, SW cor. NW NE Section 21-7-4, an old well drilled deeper, made 175 bbls. from 4,176-96 feet. Hilton Phillips and others' No. 1 Brister, SW cor. SE Section 21-7-4, was completed for 2,701 bbls. from 4,155-58 feet. Phillips Petroleum Co.'s No. 1 Richards, NE cor. SE Section 35-7-4, was completed for 218 bbls. of oil from 4,226-55 feet. Gypsy Oil Co.'s No. 1 O'Connor, NW cor. SE Section 25-6-4, is a rig.

Pontotoc County

Indian Territory Illuminating Oil Co.'s No. 2 Taylor, NW cor. SE SE Section 29-5-5, is a location. Benedum & Trees' No. 4 Malloy, NW cor. SW SW Section 30-5-5, is a location. Benson's No. 4 Oliver, SE cor. NE NE Section 32-5-5, is a location. Stanolind Oil & Gas Co.'s No. 1 Roberts, NW cor. NE Section 32-5-5, an old well drilled deeper, made 15 bbls. of oil from 2,715-32 feet. H.&M. Drilling Co.'s No. 1 Wade, SE cor. NE SW Section 29-5-8, was dry and abandoned at 1,420 feet.

Stephens County

Mudge Oil Co.'s No. 25 Ward, C SE NW Section 26-1s-5w, was completed for 10 bbls. from 670-725 feet.

Seminole County

Oils, Inc.'s No. 1 Barbee, SW cor. Section 4-8-6, is a rig.

Tulsa County

Bryan Petroleum Co.'s No. 1 Hill, NW cor. SE SW Section 8-17-13, was dry and abandoned at 2,325 feet.

Wildcat Operations in Oklahoma

(Continued from Preceding Page)

HASKELL COUNTY

Ault et al's No. 1 Hall, NW SW SW Sec. 14-9-19 ..... S.D. 2,000 ft.
Ault et al's No. 1 Hall, SE NW Sec. 25-19-9 ..... S.D. 200 ft.

KAY COUNTY

Crawford & Long's No. 1 Richards, SW NW Sec. 4-25-1w ..... S.D. 385 ft.
Lewis et al's No. 1 Harris, SE NW Sec. 14-25-1 ..... Location.
Mummert Drlg. Co. et al's No. 1 Cormick, C NW SE Sec. 9-27-2 ..... S.D. 3,693 ft.
Blackwell Oil Co.'s No. 1 Harshman, Sec. 2-26-1w ..... Rig on ground.

KIOWA COUNTY

McWhirter Bros.' No. 1 Kline, SE NW Sec. 5-6-16w ..... S.D. 830 ft.
Christian's No. 1 Jones, NE SE Sec. 8-7-18w ..... S.D. 1,610 ft.

LINCOLN COUNTY

Sovereign Oil Co.'s No. 1 Flowers, SW SE SE Sec. 14-12-3 ..... Drlg. 5,210 ft.

LOGAN COUNTY

Eason Oil et al's No. 1 Gun Club, NW NE Sec. 10-16-4w ..... S.D. 5,161 ft.

NOBLE COUNTY

Stanolind O. & G. Co. et al's No. 1 Kalb, C NE NW, Sec. 33-20-2w ..... Drlg. 3,100 ft.
Rollins et al's No. 1 Frank, SE SW Sec. 6-30-2w ..... Rig.

OKLAHOMA COUNTY

Carter Oil et al's No. 1 Shawbell, C SW NE Sec. 1-12-4w ..... Drlg. 5,608 ft.
Citizens Oil Co.'s No. 1 Sage Barber, NE cor. Sec. 21-11-3w ..... S.D. 1,200 ft.
L. C. Hivick's No. 1 Sunset Addition, NW SW NW Sec. 17-11-3w ..... S.D. 5,515 ft.

PAWNEE COUNTY

Deep Rock's No. 1 Crow, NE SE Sec. 26-23-5 ..... Rig.
Rookstool's No. 1 Wylie, NW NE SW Sec. 6-20-5 ..... S.D. 1,950 ft.

PITTSBURG COUNTY

Moffett & Hall's No. 1 Jones, NW cor. Sec. 14-8-14 ..... S.D. 1,675 ft.

PONTOTOC COUNTY

Delaney's No. 1 Harden, NE SW Sec. 30-3-7 ..... Drlg. 447 ft.
Blackwell Oil & Gas Co.'s No. 1 Abbott, NW SW NE Sec. 14-4-6 ..... 1,030 ft.; 4,000,000 ft. gas, to bradenhead.
Williams' No. 1 Krath, NE SE Sec. 33-3-6 ..... Fishing 1,542 ft.
Edna Marie's No. 1 McWhirt, NE SE Sec. 11-2-6 ..... S.D. 570 ft.
Sunray Oil's No. 1 Grant, SE NE Sec. 11-4-8 ..... S.D. 2,796 ft.

POTTAWATOMIE COUNTY

Brown et al's No. 1 Sauter, NW cor. Sec. 35-11-4 ..... Digging cellar.

ROGER MILLS COUNTY

Ute Oil Co.'s No. 1 Williams, C SW Sec. 23-12-24w ..... S.D. 5,150 ft.
L. C. Hivick's No. 1 Davis, C NW NE Sec. 4-11-26w ..... S.D. 3,420 ft.

SEMINOLE COUNTY

Donnelly et al's No. 1 Shepard, SE NE Sec. 4-8-8 ..... S.D. 1,270 ft.

WASHITA COUNTY

Miley Pet. Co.'s No. 1 Montgomery, SW NW SE NW Sec. 33-9-17w ..... S.D. 1,004 ft.
Miley Pet. Co.'s No. 1 Wolfe, NE SW Sec. 33-9-17w ..... Rig.
Cooper & Terhune's No. 1 Blocker, NW cor. Sec. 29-8-19w ..... Show oil 2,459-67 ft.; S.D. 2,757 ft.
Burns & Prince's No. 1 Deck, SW cor. Sec. 21-8-18 ..... S.D. 2,160 ft.

Oklahoma Panhandle

TEXAS COUNTY

Three Way Oil Co.'s No. 1 Crane, SW NW Sec. 11-1-1E ... T.D. 4,720 ft.; to cement.

Southern Oklahoma

ATOKA COUNTY

L. E. Stewart et al's No. 1 Stewart, SE SE Sec. 2-4s-10 .. Drlg. 290 ft.
Malarnee et al's No. 1 D.O.K. Land Co., C E half SE Sec. 35-2s-13 ..... S.D. 680-704 ft.; est. 3 bbls.
Brookshire's No. 1 R. W. Rowland, NW NE SE Sec. 13-3s-10 ..... S.D. 3,365 ft.

JEFFERSON COUNTY

Bridwell's No. 1 Wolghomuth, NW NE SE NW Sec. 30-4s-5w ..... 1,483-85 ft; est. 48 bbls; to comp.
E. S. Bonner's No. 1 Burgess, NE SE Sec. 12-5s-8w ..... S.D. 750 ft.

MARSHALL COUNTY

Lee Cross' No. 1 Hamlin, SE SW SW Sec. 26-6S-5 ..... Drlg. 430 ft.
Thomas' No. 1 Sotliff, SW SE SE SW Sec. 36-5s-6 ..... Drlg. 380 ft.

McCURTAIN COUNTY

Stampfs' No. 1 Robert Harris, SW NW SW Sec. 14-9s-25 .. S.D. 2,775 ft.

PUSHMATAHA COUNTY

Whitehead et al's No. 1 Messer, SE SW SW Sec. 35-3s-18 ..... S.D. 1,950 ft.

STEPHENS COUNTY

Geo. Pace et al's No. 1 Peck, NW SW Sec. 32-2s-6w .... Rig.
Calif. Prod. & Oper. Co.'s No. 1 Garnett, SE NE NE Sec. 11-3s-6w ..... S.D. 325 ft.
Calif. Prod. & Oper. Co.'s No. 1 Suton, NE SE SW Sec. 12-3s-6w ..... Rig.
Gillette Bros.' No. 1 Cooley, NW SE NW Sec. 17-3s-5w ... S.D. 530 ft.
George's No. 1 Ryan, NW SW NE Sec. 21-3s-15 ..... S.D. 510 ft.

GAS FOR MEXICO CITY

Negotiations between the Royal Dutch-Shell affiliate, Mexican Eagle Oil Co., and the federal secretary of industry for a concession providing for gas service in the Mexico City area are reported in final stages. Anticipating a satisfactory conclusion, the company has gone forward with plans for pumping the gas through its fuel oil line now connecting the oil fields on the East Coast and its cracking plant in this city.

The service will also bring gas to the cities of Pachuca, Puebla, Toluca and Cuernavaca.

MADE VICE PRESIDENT

T. A. Dines, formerly president of the Midwest Refining Co., until consolidation with the Standard Oil Co. (Indiana), has been made a vice president of the Indiana company. He will retain an office in Denver, Colo., as a representative of the company's interests in the Rocky Mountain area. Mr. Dines is also president of the Utah Oil Refining Co.

Second Large Oil Well Is Completed in Hunton Lime Pool South of Voshell Field in Kansas

By W. A. SPINNEY
Staff Correspondent, Kansas Fields

Another oil well of gusher proportions was found in McPherson County, in the Hunton lime, which is becoming an important producing horizon in Kansas. The well is Derby Oil Co.'s No. 1 Hamm, SE cor. NW, Section 33-21-3w, south of the Voshell Pool, and on the southern edge of the county. It produced 472 bbls. of oil in four hours from pay at 3,464-68 feet. It is the second well completed in the area.

The first Hunton lime well in the county was J. E. Mabee, Inc. and others' No. 1 in Section 33-21-3w. The new well, which is located 660 feet north of the discovery well, began flowing when the bit was only a few feet below the cement plug. The Derby Oil Co. recently completed a pipe line into the field and will run the oil from No. 1 Hamm. The Hamm lease is a strip 660 feet wide and a mile long, east and west. It is believed that this pool is located on the Abilene Arch, on which have been discovered the Johnson and Voshell Fields in McPherson County and the Burrton Field in Reno County.

Voshell Extension Looks Better

In the south extension to the Voshell Pool in McPherson County, a well found production in the Simpson sand, adding importance to the field. The Texas Company's No. 1 Nachtigal, SW cor. SE SW, Section 21-21-3w, extends the Simpson sand producing area a mile to the south. The top of the Simpson sand was found at 3,424 feet and when drilled 3 feet deeper the well started flowing. It was estimated at 750 bbls. a day. The owners plan to make a swabbing test at once. All other producers in the south extension found production in the chat.

The second test drilled to the Hunton lime in the area south of the Voshell Pool is J. E. Mabee, Inc. and others' No. 1 Koehn, NW cor. SW NE, Section 33-21-3w. It found the top of the Hunton lime at 3,447 feet and after drilling 1 foot the owners decided to land a liner and are now fishing. There was no oil showing but pay is expected in the next few feet.

J. E. Mabee, Inc. and others' No. 1 Nickel, NE cor. SW, Section 33-21-3w, McPherson County, the Hunton lime discovery well in the county, was drilled 1 foot deeper to a total depth of 3,468 feet and is now estimated at 1,200 bbls. a day. It was making around 500 bbls. a day before being deepened.

Derby Oil Co.'s No. 1 Hamm, SE cor. NW, Section 33-21-3w, the north offset to the discovery well, was rigging up standard tools at a total depth of 3,404 feet and is believed to be the top of the Hunton lime.

A wildcat test, Sinclair Prairie Oil Co.'s No. 1 Turgeon, C NE NW, Section 3-16-12w, Barton County, was ready to spud. The company has been delayed in spudding on account of the lack of drilling water.

Decline in Ritz-Canton

Part of the potentials in the Ritz-Canton Pool in McPherson County have been completed and they reveal a large decline from the previous figures. The largest well in the field, the Dickey Oil Co.'s No. 4 Decker, NW cor. SE, Section 35-19-2w, which was completed July 20, 1932, and which flowed 12 hours at the rate of 14,326 bbls. per day, made 700 bbls. in 24 hours on the last potential gauge.

The tests show that 68 wells, producing from the Viola lime, have a potential of 52,420 bbls. a day, which is a 33 per cent decline for the same wells from the previous potential. A total of 104 Viola lime wells have been completed in the field. Only 31 of the chat producers out of a total of 67 chat wells, have completed their potential tests, showing a total of 9,570 bbls. a day compared to 26,090 bbls. for the same wells on the previous potential.

Western Pools Lack Market

In the Isern Pool, in Barton County, two wells with a potential of 1,073 bbls. daily, produced 2,055 bbls. during the month of October.

A well that has been shut in since its completion is the Midwest Refining Co.'s No. 29 Scheufler, in Section 9-20-11w, Barton County. It has an estimated potential of 700 bbls. daily.

Wells in Ellsworth County that were shut in during October include Slick, Pryor & Lockhart's No. 1 Breford, in Section 7-17-10w, which is estimated at 800 bbls., and the same operators' two Heiken wells, in Section 25-17-10w, having an estimated combined potential of 2,382 bbls. per day.

The Stoltenberg Pool, in Ellsworth County, with six producing wells, with a potential of 5,276 bbls., was shut in last month.

In the western part of Rice County, the two wells in the Beyer Pool have been allowed to produce 100 per cent of their production, while the Ploog well was shut in during the month of October. In the Schurr Pool, in Rice County, the 12 completed wells were allowed to produce 5 per cent of their potential production during October. The potential totaled 11,988 bbls. a day, but only 18,940 bbls. of oil was produced during the month.

The Sharpe Pool, with a daily potential of 2,090 bbls., was shut in all month. The well in the Steckel Pool, with an estimated potential of 150 bbls. daily, was also shut in.

Both of the pools in Rush and Stafford Counties were shut in all the month. The Greenawalt well, in Section 17-19-16w, Rush County, with a potential of 50 bbls. daily and the four wells of the Midwest Refining Co. in Stafford County in the Richardson district, with a potential of 4,900 bbls. daily, were shut in for the lack of a pipe line outlet.

Significant Failures

Two important tests along the Ellsworth Arch in Ellsworth County found water in the Siliceous lime. That these tests are sufficient to prove that the northern part of the arch is dry or that they indicate a northern extension to that part of the Ellsworth Arch anticline is not underlain with petroleum seems to be the general belief. Pools located on the arch are the Sharp, Beyer and Ploog Pools, in Rice County. The two failures were located in the southeast part of Ellsworth County. One of them, Phillips Petroleum Co.'s No. 1 Hochman, NE cor. NW SE, Section 17-16-7w, found the Siliceous lime at 3,059-65 feet. The top of the Siliceous lime was higher than in any well in the county to date. The test was believed to be logging high as the Oswald lime was found at 2,600 feet. The other was Morgan and others' No. 1 Andrews, NE cor. SW, Section 3-17-8w. It found water in the Siliceous lime at 3,398-3,400 feet. This test found approximately 200,000 feet of gas at 1,200 feet and a showing of oil in the Oswald lime at 2,810-25 feet. The top of the Oswald lime was found at 2,760 feet.

Potentials have been taken in the Stratman area of Ellsworth County, in Township 17-10w, where 11 wells had a previous potential of 16,607 bbls. daily. The allowed production from this pool has been 10 per cent of its potential production because of its lack of pipe line outlet. According to State Umpire L. R. Pickrell, the Stratman Pool produced 48,528 bbls. of oil during the month of October.

The state umpire also advises that the entire curtailed Siliceous lime area in the central western part of the State produced 74,632 bbls. of oil from 49 wells in October. Practically all of the pools in the central western part of the State were prorated and some were shut in entirely for the month and have been for some time in the past.

Ritz-Canton Rated High

On November 1 the state umpire, in a detailed report of the Ritz-Canton-Decker Field, showed the potential production of the field to be 156,756 bbls. in 24 hours from 171 wells. There were 67 chat wells with a potential of 48,725 bbls., and the Viola lime wells had a potential of 108,031 bbls. in one day. The following pipe line companies reported nominations as follows:

Company—	Bbls. per day
Dickey	1,300
Phillips	4,700
Shell	2,700
Skelly	900
Stanolind	1,000
Texas-Empire	50
White Eagle	6,900
	17,550

In accordance with the recent order of

(Continued on Page 53)

Wildcat Operations in Kansas

(Descriptions are East unless marked otherwise)

BARTON COUNTY

Company, farm and location— Remarks:

Sinclair Prairie Oil Co.'s No. 1 Turgeon, C NE NW, Sec. 3-16-12w ..... Rig.
Rankin's No. 1 Socey, C SW NE Sec. 34-18-12w ..... Rig.
Doherty et al's No. 1 Roesler, SW NE Sec. 11-18-11w .... S.D. 1,975 ft.
Smith et al's No. 1 Wilson, C NW SW Sec. 12-18-14w .... Drlg. 3,122 ft.
Skelton Oil Co.'s No. 1 Ott, C SE SE Sec. 16-19-14w ..... Set liner 3,530-46 ft.; show oil; S.D. 3,605 ft.

BUTLER COUNTY

Cameron-Great Basin Oil Co.'s No. 1 Landon, C SE NW Sec. 13-28-2 ..... Drlg. 3,364 ft.
Ramsey's No. 1 Michael, SW NW NW Sec. 18-27-3 ..... U.R. 2,927 ft.

COWLEY COUNTY

Roth & Farout's No. 1 Craig, SE cor., Sec. 2-32-3 ..... Drlg. 992 ft.

DICKINSON COUNTY

Severs' No. 1 Livingood (O.W.D.D.), SE NW Sec. 13-13-21 S.D. 4,900 ft.

EDWARDS COUNTY

Mid-Kansas O. & G. Co.'s No. 1 Converse, SW NE NE Sec. 30-24-18w ..... Drlg. 5,236 ft.

ELLIS COUNTY

Phillips Pet. Co.'s No. 1 Unknown, C SW Sec. 33-11-17w .. Location.

ELLSWORTH COUNTY

Sinclair Prairie's No. 1 Unknown, C NE NE Sec. 27-15-8w ..... Location.
Buckford's No. 1 Burke, C NE SW Sec. 14-14-9w ..... S.D. 50 ft.
Gurley Bros. and Barnsdall's No. 1 Union Pacific, NW SW Sec. 7-14-7w ..... S.D. 2,245 ft.
R. Gear et al's No. 1 Kroboth, SE NW Sec. 13-15-10w ... Skidded rig; drlg. 400 ft. new hole.

FINNEY COUNTY

L. F. Meyers' No. 1 Brown, S SW Sec. 16-25-34w ..... Drlg. 550 ft.

FORD COUNTY

Swain et al's No. 1 Henthorn, C NW Sec. 21-25-24w ..... Top Sil. 5,669 ft; T.D. 5,772 ft; S.D.

GRAHAM COUNTY

Schleimeyer et al's No. 1 Smith, SE Sec. 24-8-25w ..... R.U.S.T. 3,615 ft.

GREENWOOD COUNTY

York State Oil Co.'s No. 1 Joy, SE cor. Sec. 11-23-11 ..... Drlg. 800 ft.

HARVEY COUNTY

Liggett et al's No. 1 Davis, SW SE NE Sec. 7-24-1 ..... T.D. 3,577 ft; abd. dry.

HASKELL COUNTY

Victor Martin et al's No. 1 Weeks, C NW Sec. 8-28-31w ... Rig.

MARION COUNTY

Farrell et al's No. 1 Williamson, C NW SE Sec. 21-19-4 .. S.D. 1,015 ft.
Vernon et al's No. 1 Schmidt, C SW NW Sec. 35-19-1 ..... Drlg. 2,110 ft.

McPHERSON COUNTY

Whan et al's No. 1 Nelson, NW SE Section 18-19-2w ..... Location.
Darby Pet. Co.'s No. 1 Pankratz, NW SE Sec. 5-20-1 ..... Drlg. 3,287 ft.
Snyder et al's No. 1 Carlson, SE cor. Sec. 4-19-3w ..... Drlg. 2,542 ft.
Sidwell et al's No. 1 Nichols, NE NW NW Sec. 28-17-1w .. S.D. 1,205 ft.

MORTON COUNTY

Hydraulic Oil Co.'s No. 1 State Land, NW SE Sec. 22, 34-43w ..... T.D. 3,640 ft.; temp. abd.
Urschel et al's No. 1 Bersuch, NW SE NW Sec. 10-17-7 ... S.D. 1,385 ft.

NESS COUNTY

Sinclair Prairie Oil & Gas Co.'s No. 1, C SW SW Sec. 16-19-21w ..... Rig.

NORTON COUNTY

Richards et al's No. 1 Colby, Sec. 17-4-21w ..... Rig.

OSAGE COUNTY

Briggs & Smith's No. 1 Wood, SE NW Sec. 21-14-15 ..... S.O. 2,190-2,200 ft.; temp. abnd

PRATT COUNTY

Ninnescah O. & G. Co.'s No. 1 Hardesty, SW SE SE Sec. 28-27-11w ..... Drlg. 3,225 ft.

RENO COUNTY

T. L. Johnson's No. 1 Crotts, NE NW NE Sec. 27-26-10w . S.D. 50 ft.
Martin et al's No. 1 Yadu, C NW NW Sec. 15-24-5w ..... S.D. 218 ft.

RICE COUNTY

R. Ramsey's No. 1 School Lot, NW SW NW Sec. 32-19-9w . Drlg. 2,600 ft.
Langston et al's No. 1 Wells, NE SE Sec. 4-20-9w ..... Rig.
J. Liggett et al's No. 1 Thodel, C NW NW Sec. 11-21-7w .. S.D. 50 ft.

RUSH COUNTY

Skelton et al's No. 1 Brock-Hartman, SW SE NE Sec. 4-18-16w ..... S.D. 50 ft.

SHERIDAN COUNTY

Flo et al's No. 1 Shoemaker, SE SW Sec. 27-7-26w ..... Hole full water 4,535-45 ft.; S.D.

STEVENS COUNTY

Argus Prod.'s No. 2 Christopher, C NE Sec. 10-32-39w .... S.D. 5,521 ft.

STAFFORD COUNTY

Stringer et al's No. 1 Swindle, SW NE Sec. 2-26-11w ..... Spudded; S.D.

SUMNER COUNTY

Austin et al's No. 1 Fog, SW SE SE Sec. 14-34-1w ..... Drlg. 4,230 ft.
Trees Oil Co. and Shell's No. 1 Springate, NE SE SW Sec. 6-34-2 ..... Fishing 3,639 ft.

Two Tests in Louisiana-Arkansas Disappointing; New Development in Mississippi Area

By D. H. BANCROFT
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La. Nov. 21.—The two "hot" wells of this district due to be tested during the week both turned out rather disappointing. Gibson-Johnson's No. 2 Frost - Johnson Lumber Co., in Section 15-9-13, in the promising Converse area of Sabine Parish, did not perform according to expectations warranted by its early show, and Fox & Langford's No. 1 Coleman, Section 25-16-25, Lafayette County, Arkansas, tested salt water. The former is swabbing 10 to 15 bbls. of oil after standing overnight during which oil rises a few hundred feet in the hole from a broken sandy marl formation at 1,490-1,516 feet with streaks of sand ranging from 2 to 7 feet in thickness with the last 1,514-16 feet. Six and five-eighths-inch casing was cemented at 1,484 feet. It is, apparently, not as promising a prospect as the same operators' No. 1 Frost-Johnson in Section 19-9-13, at the same depth, which is pumping 15 bbls. daily. Nevertheless, there were several more new locations in the Converse area.

Fox & Langford's No. 1 Coleman well made a drill stem test at 2,740 feet and got 18 fourbles of water in 10 minutes. Cores showed sand with only a slight odor of oil at the top. At last reports they were in the Tokio with core tests showing sand at 2,850 feet.

Shreveport Oil Corp.'s No. 5 Muslow in Section 32-21-15, Mooringsport district of Caddo Parish, was a 25-bbl. pumper at 2,134 feet. Two Zwolle wells were dry and a third was abandoned as a location. The first two were Coates Petroleum Co.'s No. 1 Gray, Section 3-7-13, at 2,650 feet, and Frank Melat's No. 1 Davis, Section 2-7-11, at 2,680 feet. Lion Oil & Refining Co. abandoned location for No. 2 LaRoux in Section 3-7-13.

The following wells, inactive over a period of several months, have been dropped from field reports as of the status shown: Caldwell Parish, Louisiana, Carter-Bell's No. 1 Taylor, Section 17-14-4, shut down in shale at 3,712 feet; Shelby County, Texas, Western World's No. 1 Foster & Billingsley, Jerry Bowlin Survey, shut down at 2,940 feet in lime. Lamar County, Alabama, Briggs & Knapp's No. 1 Wheeful, Section 25-12-14, dry, at 1,780 feet.

In contrast to the poor showing in completions, 19 new locations were reported during the week, 15 in Louisiana territory, 2 in Union County, Arkansas, 1 in Hinds County, Mississippi, and 1 in Harrison County, Texas.

NORTH LOUISIANA

Of the new locations in this division three were in Converse territory: H. P. Key's No. 1 T. J. Paul, a townsite location in Converse in Section 10-9-13; H. C. Lessenger's No. 1 Bowman-Hicks, in the SW cor. Section 13-9-13, and Rockmill and others' No. 1 Patrick, NE SW Section 21-9-13. Other Sabine Parish locations were Alexander & Mason's No. 1 R. C. Cooper, NW NE Section 31-8-11; W. Brumley's No. 1 fee, NW NW Section 2-7-11; Colonial Oil Co.'s No. 2 Williams, SE NW Section 13-7-11; Paul Limmer, trustee's No. 2 Chaddick, SE NW Section 32-8-10; H. L. Patton's No. 1 Ponder, NE SW Section 15-7-11, cemented 10-inch at 21 feet; I. N. Pharis, trustee's No. 1 Cutrer, NE SW Section 13-7-11; Picayune Oil Co.'s No. 1 Porter, NW SW Section 30-8-11; The Texas Company's No. 5 Stille, SE SW Section 33-8-11.

Bridges & Clark had a small show of oil at 3,270 feet in No. 4 Williams, Section 33-10-11, a wildcat in the Pleasant Hill district of Sabine. In the Converse district, Lee & Burnett's No. 1 Burkett, Section 10-9-13, with 6-inch cemented at around 1,470 feet, and Sabine Production Co.'s No. 1 Whiting, Section 4-9-13, with 8¼-inch set at the same depth, both on top of the marl, will be the next tests attracting most attention.

R. T. Henderson made location for No. 1 Sistrunk, a wildcat in the SE NW Section 9-9-12, east of Converse. Other wildcat locations were George L. Pace's No. 1 Cole, SE NE Section 11-11-11, DeSoto Parish, and Petroleum Industries, Inc.'s No. 1 Lee Lumber Co., in Section 13-5n-2e, Rapides Parish, somewhat north of but included in the play going on in Central Louisiana from the Texas line to the Mississippi River.

H. I. Morgan's deep test south of Bellevue Field in Bossier Parish, No. 2 Smith in Section 22-19-11, one of the deep holes that is helping develop the future prospects of big production in North Louisiana, was in the red beds at 2,579 feet. Bellevue produces from the shallowest depth in this division at around 400 feet and the logs of its deeper tests are used more or less as correlative markers in all the deep drilling that is and has been going on. Plain Dealing Oil & Gas Co.'s No. 1 Nattin, Section 15-22-14, had a show of oil and water at 2,960 feet and is shut down after bailing. It appears to have been the typical promising, and later disappointing, show of most of the wells that have been drilled around Plain Dealing during the last 15 years.

ARKANSAS

Miller County, the most active area of Arkansas, was without any developments to warrant much excitement. Dennis & Cubage tested seven fourbles of salt water in No. 1 Head, SW SW Section 20-15-26, on drill stem test at 2,672-90 feet and were shut down at 2,800 feet. Duluth-Arkansas Oil Co. topped the chalk at 1,616 feet and was drilling at 1,900 feet. W. M. S. King abandoned No. 1 E. L. Beck, NE SW Section 35-15-26, at 3,218 feet, approximately 300 feet lower, on surface elevations, than what production there has been found in Miller County was developed.

Two new locations in the Junction City area of Union County, approximately 20 miles south of El Dorado, where one or two deep holes have been drilled to 4,000 feet or lower during the last five years were announced during the week. Graves & Ferguson's No. 1 Patterson, NE NE Section 31-19-16, is announced as scheduled for 5,000 feet and has derrick up. Mamie McCurrie and others have derrick up for No. 1 Rowland, SW SW Section 9-19-11, for another deep hole. Both are on adjoining blocks of approximately 5,000 acres in the Junction City district, or on the same block—there appears to be some confusion.

MISSISSIPPI

The big news out of Mississippi is the announcement of the Gulf Refining Co.'s plans. It is understood that an appropriation has been made by headquarters office for development of the huge block the company has assembled in seven counties of the southern, central and southeastern parts of the state, based partly on results of geophysical exploration and the oil showings obtained in two wells in the Hinds-Rankin County territory around Jackson gas field. The company has blocked approximately 300,000 acres in Jackson, Harrison, Hancock, Stone, Perry, George and Green Counties and location for the first test has been made on the Dantziger Lumber Co. land in Section 27-4s-8w, Jackson County, across the bay from Biloxi on the Gulf Coast. Heretofore most Mississippi development has been many miles north, in a belt including the Jackson gas area extending across the state as, it might be an extension of the Jackson fault that is getting such a play in central Louisiana. The Gulf is not the only major company that has gone in heavily for Mississippi stuff, and the gossip is that Mississippi is due for a drilling campaign of major proportions during the ensuing year, or as soon as East Texas ceases to be the threat it is. Half a dozen of the big companies have been active there, as along the Jackson fault in south central Louisiana, in leasing large blocks on, it is understood, commercial leases of long life and small rentals. The Jackson gas district had one new location during the week, Cleve Love having derrick up for No. 2 Security Realty Co., NE NE Section 36-6-1e, Hinds County.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

North Louisiana

AVOYELLES PARISH

Company, well, farm name, section and block—	Remarks:
T. J. Woodley, tr.'s No. 1 Thompson & Koltz, 2,640 ft. E, 200 ft. S, NW cor. Sec. 11-2n-5e	Drlg. gumbo 1,285 ft.

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahan, 158 ft. S, 160 ft. W, NE cor. NW Sec. 32-2s-9w	S.D. 1,265 ft.

BIENVILLE PARISH

Black Lake Dev. Co.'s No. 1 Petty Stave Co., NW NW Sec. 19-15-6w	Top chalk 2,460 ft; S.D. in shale 2,500 ft.
R. S. Ross et al's No. 1 W. M. Beck, NE NE Sec. 3-18-8	Derrick.

BOSSIER PARISH

Belmont Oil Co.'s No. 1 Edwards, 190 N and E, SW cor. NE Sec. 13-18-12	S.D. 1,106 ft.
Breazelle & Steckoll's No. 1 Nattin, C SW NE, Sec. 15-22-14	Set 6-in. 2,967 ft; T.D. 3,018 ft; S.D.; W.O.
Breazeale & Steckoll's No. 2 Nattin, 300 ft. S and W, NE cor. NW NE Sec. 22-22-14	Derrick.
A. W. Phillips, tr.'s No. 1 Oden, 300 ft. W, 150 ft. N, SE cor. NW NW Sec. 4-18-13	Set 10-in. 96 ft; S.D.
Texana O. & G. Co.'s No. 1 Alford, 180 ft. S, 1,140 ft. W, C, Sec. 10-18-11	Began drlg. Nov. 3; drlg. 1,230 ft.

CADDO PARISH

Bolinger & Walker's No. 1 Thompson, SE SW Sec. 16-22-14	Derrick.
Caddo-Prairie Dev. Co.'s No. 1 Nichols, 660 ft. N, 400 ft. E, SW cor. NE SW Sec. 10-23-15	Drlg. shale 2,010 ft.

CLAIBORNE PARISH

Leue Oil Co.'s No. 1 Kiner, Sec. 2-21-7	Rigging up.
Robertson & Aurand's No. 1 Smith, 200 ft. S and E, NW cor. SE NE Sec. 8-21-7	Cored sandy shale 1,416 ft; S.D. 1,430 ft.

DESOTO PARISH

Coker et al's No. 1 Boone, 200 ft. N and W, SE cor. SW NW Sec. 12-10-11	S.D. 60 ft.
Donley & Chastain's No. 1 H. Smith, 325 ft. W, 600 ft. N, SE cor. Sec. 31-14-15	S.D. 2,470 ft.
Honeycut O. & G. Co.'s No. 1 Porter, 423 ft. S, 414 ft. W, NE cor. NW NE Sec. 26-12-13	Cored shale 2,615 ft.
S. A. Guy's No. 1 Dowling, 469 ft. E, 382 ft. S, NW cor. NE Sec. 31-14-14	Reaming to bottom; T.D. 3,068 ft.
Mrs. A. L. Ibach, tr.'s No. 1 Rambin, 250 ft. S and E, NW cor. NE NE Sec. 32-11-11	Began Nov. 14; cmtd. 10-in. 101 ft.
E. T. Oakes' No. 1 R. H. Bryant et al, 200 ft. N and W, SE cor. NE NW Sec. 30-13-15	Coring 4,345 ft.
DeSoto Dev. Co.'s No. 1 Nickey, Sec. 7-13-12	Partly rigged up and S.D.
Geo. L. Pace's No. 1 John Cole, 300 ft. N, 150 ft. E, SW cor. SE NE Sec. 11-11-11	Derrick.
G. C. Smith et al's No. 1 Wollums, 330 ft. N and W, SE cor. Sec. 30-12-12	S.D. chalk 1,400 ft.

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Daily Average Runs

Daily average runs from the field for the district as a whole showed a decline of 1,000 bbls. over the week. Louisiana pools runs totaled 29,500 bbls. compared to 30,460 the week before, Zwolle accounting for most of the difference with 8,775 bbls. against 9,720 bbls. the week before. Arkansas runs were 33,755 bbls. compared to 33,875 last week. Total runs for the district were 63,255 bbls. compared to 64,335 bbls. the week before. Runs from the several pools were:

NORTH LOUISIANA

	Bbls.
Caddo light	5,000
Caddo heavy	1,880
Cotton Valley	700
DeSoto-Red River	1,880
Elm Grove	370
Haynesville	3,520
Holly	215
Homer	2,590
Pleasant Hill	260
Sarepta-Carterville	810
Urania	3,500
Zwolle	8,775
Total	29,500
Last week	30,460
Decrease	960

ARKANSAS

Champagnolle	1,660
El Dorado	2,900
Lisbon	460
Nevada County	900
Smackover light	2,875
Smackover heavy	23,620
Stephens	180
Urbana	1,160
Total	33,755
Last week	33,875
Decrease	120
Both states	63,255
Last week	64,335
Decrease	1,080

Exceptional Well Found in Wyandot County, O.; Extensive Operations in the Indiana District

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Nov. 21.—In the old Lima Field of northwestern Ohio, in Wyandot County, Jones & Coyle's No. 2 on the Margaret Brillhart farm, Section 28, Crane Township, is an exceptional find, showing 1,600,000 feet of gas and the first 24 hours put 12 bbls. of oil in tank. Top of the Trenton lime was found at 1,299 feet and the well was drilled to a total depth of 1,320 feet. It has not been shot. Ridge Oil & Gas Co.'s test on the G. O. Hiles farm, Section 7, Crawford Township, same county, is a light gas well, and shut in with 27,000 feet from 1,355-65 feet. Harpster and others are still shut down in their test on the L. G. Beis farm, Section 11, same township, at 1,350 feet. Newcomer and others' test on the Albert Rebler farm, Section 24, Pitt Township, same county, is shut down at 1,150 feet, and Gimbill, Burton & Kuens have a rig on the Ward W. Walton farm, Section 21, Crane Township, also in Wyandot County.

In Wood County, Pember & Raydure's test on the F. and R. Wagner farm, Section 27, Jackson Township, is reported as good for only 2 bbls. from 1,462-84 feet.

W. J. Gettman and others are drilling a second test on the Francis A. Crum farm, Section 12, Hopewell Township, Seneca County. Green and others are shut down at 1,531 feet on the Mary McElhany farm, Section 15, same township.

Grover Canwell is reported drilling around 1,200 feet on the Allen B. Rouston farm, Section 12, Pleasants Township, Hardin County.

Sandusky County is to have a number of wells drilled near Fremont in Rice Township, as the test made by Montgomery and others on the Frank Miller farm, Section 31, produced 12 bbls. initially from the Trenton lime from 1,329-64 feet, but not enough gas showed to make it a flowing well.

CENTRAL OHIO

The best of the two completions in the Central Ohio Field was drilled by H. E. Perkins on the Charles M. Babcock farm, Section 14, Fallsburg Township, Licking County, which produced 100 bbls. in 48 hours, and will make a 25-bbl. producer. The other well was drilled by McMillan and others on the Frank Kovarick farm, in Lot 95, Eaton Township, Lorain County, with an estimated 3,000,000 feet of gas in the Clinton lime from 2,438-54 feet.

City Natural Gas Works is drilling a second test on the Charles Fauble farm, Section 34, Berne Township, Fairfield County. Charles Blume and others are shut down at 2,025 feet on the Francis E. Nye farm, Section 35, Rush Creek Township, same county. City Natural Gas Works is drilling at 1,850 feet in No. 3 on the William Hartman farm, Section 26, Pleasants Township, same county.

In Licking County, Hanover Township, the Everette Gas Co. is drilling No. 5 Felix Claypool farm, Section 7. Wehrle Gas Co. is drilling No. 1 on the Milton Parr farm, Section 11, Franklin Township, same county.

In Athens County, Waterloo Township, the Standard Natural Gas Co. is drilling a second test on the David Young farm, Section 12, and H. O. and C. O. Young are drilling No. 2 on the Lafayette Hewitt farm, Section 23, same township.

In Holmes County, the Lydic Oil & Gas Co. is drilling No. 3 on the William Martin farm, Section 22, Monroe Township, and Mehowa Oil & Gas Co. has a rig on the Benjamine Ulrick farm, Section 20, Hardy Township, same county.

In Stark County, the Fulton Oil & Gas Co. is drilling No. 4 on the Henry C. Rudy farm, Section 6, Jackson Township. East Ohio Gas Co. is drilling No. 2 Edward A. Frank farm, Section 14, same township, and has a location for No. 3 on the same farm. Same company made a location for No. 4 John Struble, Section 23, and also for No. 3 H. S. Belden, Jr., farm, Section 24, same township.

In Guernsey County, Adams Township, McLaughlin and others made a location on the William H. Dyke farm, Section 9.

In Carroll County, Collins, Linsell and others are shut down on the Thomas Leggett farm, Section 34, Orange Township, at 1,103 feet.

In Belmont County, Bradfield and others have a rig for a second test on the John Shutway farm, Section 35, Union Township. O. K. Oil & Gas Co. is drilling No. 1 on the J. T. Murphy farm, Section 29, same township.

INDIANA

Indiana oil and gas operations as compiled by Paul F. Simpson, state gas supervisor, Department of Conservation, Division of Geology, Indianapolis, by counties:

Allen County.—Woodburn Gas Co. is drilling No. 1 Fred Norden, NW, Section 34, Maumee Township.

Daviess County.—Amsler & Gilmore completed a 2,000,000-foot gas well on the Oliver H. Smith land in the NE, Section 4, Harrison Township, with a total depth of 650 feet. Hartman and others reported a dry hole at 1,350 feet on the Sylvester Swan farm in Section 28, Veale Township. No. 1 John S. Williams completed by Harry Hanson and others some time ago in the SE, Section 5, Harrison Township, was a dry hole at 830 feet.

Gibson County.—No. 4 G. B. Allen, in the NE, Section 22, Columbia Township, was completed by Wabash Public Service Corp. at 1,484 feet, with an ini-

(Continued on Next Page)

Belmont County, Ohio, Develops Small Pool; West Virginia Reports a 50 Barrel Well

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Nov. 21.—Belmont County, Ohio, came to the front in the eastern fields with the completion of four good oil wells in the small pool developing there. Union Gasoline & Oil Corp. drilled four tests in Richland Township, and has four wells listed as having an initial production of 105 bbls. for the total. A test operation in Licking County was completed as a 45-bbl. well.

In the West Virginia division a 50-bbl. test well is reported from Roane County, and the Pure Oil Co. has a 6,000,000-foot gasser in Boone County.

A total of 10 oil wells, with an initial production of 215 bbls., and four gassers were completed in the three divisions of the eastern fields. There were also reports of seven dry holes.

SOUTHEAST OHIO

Union Gasoline & Oil Corp.'s test on the Fred Kurth farm in NE Section 25, Richland Township, Belmont County, was drilled to the Berea sand at a depth of 1,954 feet. Production is estimated at 25 bbls. The test of these operators in the same pool located on the Steve Evanek farm, NE Section 25, was completed in Berea sand at 2,033 feet for an estimated production of 25 bbls.

Production was estimated at 35 bbls. in the test on the Nick Dyken farm in SW Section 26, after a depth of 2,077 feet was reached, Berea formation. A second test was completed on the Fred Kurth farm, SE Section 26. It was drilled to the Berea sand at 2,114 feet, where production is estimated at 20 bbls. These wells were not shot and all are shut in at present due to the demands of curtailment.

Upham and Perkins swabbed 45 bbls. out of their test on the C. M. Babcock farm, NE Section 17, Fallsbury Township, Licking County, in the second day after it was shot in the Clinton sand at 3,007 feet.

Kolb and McGrath have a 2-bbl. well in their test on the L. A. Severcool farm on Lot 1, Litchfield Township, Medina County. This well found the Berea grit formation at 305 feet.

Gas Wells

The two gassers completed in the Southeast Ohio division are located in Washington County. Heldman Brothers have a small gasser in their test on the McDonald Greathouse farm, Section 1, Liberty Township. This well found the grit at 1,964 feet.

Deeper drilling in an old gas well sent No. 3 of the Hill Top Oil & Gas Co. on the Whitten Hanlon farm at the head of Sheets Run in Section 30, Grandview Township from the Keener sand to the Big Injun formation at a depth of 1,820 feet. This well was not shot at that depth and production for the first 24 hours was 3 bbls. of oil and a flow of 100,000 feet of gas.

Robinson Brothers found the Maxburg sand dry at a depth of 750 feet in a test on the H. M. Stanley farm near Albany in Lee Township of Athens County.

A depth of 1,250 feet, grit formation, was reached in the test of A. E. Wright and others on the Charles S. Bobo farm near Albany, and in Section 12, Columbia Township, Meigs County. This operation ended as a dry hole.

WEST VIRGINIA

West Virginia reports two gassers, two oil wells and two dry holes for the work completed during the past week.

The Pure Oil Co. has a 6,000,000-foot gasser in its No. 58 well on the Federal Coal Co. lease in Sherman district, Boone County. This well was drilled to the Weir sand and a depth of 2,198 feet.

In Roane County, Reedy Oil & Gas Corp. completed its test on the E. S. Guthrie farm in Curtis district in the Cow Run formation as a 50-bbl. oil well.

No. 3 of G. C. Alleman Oil Co. on the Thomas Heckert farm on Walker's Creek in Walker district, Wood County, was drilled to a depth of 530 feet and the Mitchell sand for a resultant 1-bbl. producer.

McCall Drilling Co. has a 1,750,000-foot gasser in its second test on the John J. Garrett farm in Sherman district, Calhoun County, after drilling to the Salt formation at 1,830 feet.

The two dry holes reported from West Virginia are in Curtis district of Roane County. Both are test operations. One is the property of Big Four Drilling Co. and is on the H. C. Cottle farm. The Berea formation was reached at 2,618 feet. Snyder Brothers and others are abandoning their attempt on the C. and C. Guthrie farm in the same district, after failing to find production on the way to the Maxon sand at 1,972 feet.

Drilling in West Virginia

Virginia Gasoline & Oil Co. is building a rig on the Edward Reynolds farm in DeKalb district, Gilmer County, and A. E. Ellis and others have a rig on the L. H. Lydick farm in the same district.

In Wood County, C. T. Smith has made a location on the George Weber farm in Clay district. Warner Reed remains shut down on the J. W. Reed farm in Williams district and at a depth of 700 feet.

C. C. Cleavenger and others are drilling at a depth of 1,100 feet in their second test on the O. S. and Mary Taylor farm in Geary district, Roane County, and Clark and Huffman has passed the 350-foot mark in their test on the T. F. Smith farm in the same district. Clifton Oil & Gas Co. has part of the material on the ground for No. 3 on the J. L. Looney farm in Harper district, Roane County.

In Jackson County, H. H. Sheppard and others have shut down in their test on the T. C. Burdette farm in Washington district, and at 750 feet. Heck Oil Co. remains shut down in its No. 3 on the J. E. and J. G. Watkins farm in Reedy district, Wirt County, at 400 feet.

Bulger Gas Co. has passed the 750-foot level on the Samuel Van Gundy farm in Jefferson district, Lincoln County, and Hamlin Natural Gas Co. has made a location on the Jink Miller farm in the same district. A depth of 1,775 feet has

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been reached in No. 4 of Woodall Gas Co. on the James R. Adkins farm in Union district, and Golza Bragg's farm is the location of a second test belonging to R. H. Adkins and others who are cleaning out the hole after a shot at 2,126 feet.

In Washington district, Lincoln County, Harvard Gas Co. is drilling at 800 feet in its No. 3 on the Standard Fuel Gas Co. tract.

Roberts and Jarrett are temporarily shut down in their test on the Hubert Ferrell farm in Chapmansville district, Logan County. A depth of 400 feet has been reached. Cumberland Petroleum Co. has passed the 200-foot level in its No. 8 well on the Merrill Coal Co. tract, same district.

Southern West Virginia Gas Co. remains shut down for water on the A. W. Preston farm in Union district, Wayne County, and Burgess Oil & Gas Co. is rigging up on the Robert Vaughn farm, same district.

In Wetzel County, State Line Oil & Gas Co. is drilling at 2,176 feet on the C. W. Kirkhart farm in Church district. Earl Hennen and others' test on the Joseph Stender farm in Magnolia district is now past the 1,700-foot level. Shimwell Oil & Gas Co. is cleaning out on the W. J. Price farm in Grant district at 3,000 feet. The depth of this well is 3,053 feet.

Swanson and Isaac are shut down for tubing at 2,966 feet in their completed test on the H. R. Wiley China Co. lease in Guyandotte district, Cabell County. A depth of 2,100 feet has been reached in the test on the property of the Huntington Brick Plant in the same district. Cisco Drilling Co. has a rig standing on the Ed Bull farm in Guyandotte district. C. C. Wolfe and others have passed the 1,460-foot level in their test on the Calhoun and Justice lease and the test of Phillip Hager and others on the Marshall College lot is drilling at 2,150 feet. These operations are in the same district.

SOUTHWEST PENNSYLVANIA

Southwest Pennsylvania's contribution to the totals for the eastern fields for the past week include two oil wells and three dry holes.

The hole in the test of Meadow Run Oil & Gas Co. on the Clara Lynch farm in Dunkard Township, Greene County, filled up 300 feet with oil in 10 hours after the well was completed at a depth of 1,940 feet in the Big Injun formation.

Martin Oil & Gas Co. has a 2-bbl. well on the Hiram McClain farm in South Franklin Township, Washington County. It was completed in the Dunkard sand at 995 feet.

Parks Oil Co. found the Fifth sand dry at 2,036 feet in a second test on the J. D. Burg farm in Alleppo Township, Allegheny County, and J. H. Wilson & Co. has a like result in the same formation, but from a depth of 2,735 feet, on the J. C. Campbell farm in Mount Pleasant Township, Washington County.

Goldie Rendall & Co.'s test on the N. M. Arnold farm in Hanover Township, Washington County, was found dry in the Dunkard formation at 1,436 feet.

Drilling in Southwest Pennsylvania

Frank Hardt is drilling at 1,200 feet on the John Norning farm in Ross Township, Butler County, and Henry Brooks has reached 1,700 feet on the Harry Geyer farm in the same township. Oliver Miller & Co. are drilling at 300 feet on the John Cable heirs farm in Ross Township.

In Washington County E. H. Tague is drilling a second test on the William McKennan farm in South Franklin Township. It is now at the 200-foot level. A depth of 970 feet has been reached in the test of Reed & Co. on the W. C. Arnold farm in Hanover Township.

Wildcat Reports

E. E. Grimm and Benedum & Trees are shut down for a new cable at 5,755 feet in their deep wildcat test on the E. E. Knowlton farm in Section 10, Independence Township, Washington County, Ohio.

Benedum & Trees are drilling at about 2,500 feet on the I. Kaufman farm in Wise County, Virginia, and at about 3,200 feet on the Clinchfield Coal Co. lease in Russell County. Brehn & Co. are reported shut down for casing on the J. M. Arnold farm in Washington County. The depth of this well is about 2,400 feet.

The test of Benedum & Trees on the Pocahontas Coal Co. property is shut down on account of engine trouble at about 5,500 feet. This test is in McDowell County, West Virginia.

Central West Field

(Continued from Preceding Page)

tial production of 6,286,000 feet. In the SE of the same section, Knox Engineering Corp. completed No. 2 L. W. Gudgel with 1,300,000 feet from a total depth of 1,492 feet. Indiana Southwestern Gas Corp. is drilling No. 1 Eunice C. Heldt in the NE, Section 23, the adjoining section. In the northwest quarter of this section, Knox Engineering Corp. is drilling No. 1 S. H. Kirk. Same company is drilling No. 1 G. C. Sampley, in the SW, Section 8, Barton Township. Gem Oil Co. completed a shallow well on the R. S. Gregory land, finding 75,000 feet of gas at a total depth of 331 feet. The test drilled by Nelson Brothers in the SE, Section 21, Wabash Township, on the Amanta Maier farm, was completed a dry hole.

Hancock County.—Records have been received for four wells recently completed by the Vernon Gas Co. of Fortville, in Vernon Township. The wells were in the SW, Section 10, on the Mary and William Bolander land, another on the Fred Caudell lease in Section 10, and a fourth on the Effie B. Fort lease in Section 16. Each well showed about 35 pounds pressure. Same company is drilling on the John W. Hudson lot in Fortville.

Knox County.—Glengarry Oil Co. is starting No. 1 William M. Alsop, in the SW, Section 12, Busseron Township.

Kosciusko County.—The W. O. Wehrly well, drilled by the Kosana Oil Corp. in the NE, Section 10, Van Buren Township, was reported with a good showing of gas and oil at 349 feet.

Monroe County.—No. 1 William T. Howard, in the NE, Section 19, Benton Township, was completed a dry hole at 740 feet, by Petroleum Exploration Corp. and Ohio Oil Co. Same companies have started another well on the C. M. Thompson land in the NW, Section 18.

Perry County.—Conyers and Bugg abandoned their third and fourth wells on the Lee Aders lease in Section 19, Clark Township. Charles E. Dice is drilling at 625 feet in No. 4 Mary C. Backer, in the NW, Section 13, Troy Township. In the NW, Section 5, Anderson Township, Roger E. Williams is nearing the completion of his No. 2 Matt Gayer. Hughes and others abandoned their test on the Laher farm, 3 miles northeast of Bristow. Walter Parks and others are starting No. 1 Morley in the SE, Section 3, Anderson Township. C. C. Talliaferro has completed the second, third and fourth wells on the Andrew Peters lease in the NW, Section 11, Troy Township, all producing oil from a shallow depth. Another well is being started on the Cora Dixon lease in the same quarter section.

Pike County.—Claude E. Noble is drilling No. 1 Edward Adams, in the SE, Section 17, Washington Township. In the same township, A. E. Davis is drilling on the Frank Aurand lease. Indiana Southwestern Gas Corp. is drilling No. 1 C. Bradfield, in the SE, Section 18, of this township. Claude Trussler completed No. 1 McCain, in Section 18, with a production of 2,500,000 feet of gas, and is drilling on the Charles Lucas farm. In the SW, Section 17, A. V. Burden completed No. 1 W. H. Smith at 1,046-52 feet, with a production of 1,500,000 feet. Bement Oil Co. started No. 1 Andrew Willis, in the NE, Section 13, Washington Township. In the SW, Section 16, Jefferson Township, Indiana Southwestern Gas Corp. completed its

Thomas H. Stone well as a dry hole at 1,152 feet.

Rush County.—Indiana Gas Co. completed a good gas well at 863 feet on the R. E. Mauxy farm, north of Rushville; the pressure was 128 pounds.

Sullivan County.—The Niagara Oil Corp. deepened a well on its Clarence Blount lease in Section 1, Turman Township, from 655 feet to 717 feet, but found no new production and plugged back to 655 feet. The Jackson Hill Coal Co. is drilling in Section 10, Jackson Township. Parker and others are shut down at 228 feet on the Johnson-Prather farm. Yeager and others have started No. 1 Emma Lloyd, in the NW, Section 18, Carry Township. In the SE, Section 24, Turman Township, Scott & Whitlock have shut down No. 2 Tom and Kern Metzger at 1,265 feet. Parker and Lloyd are drilling on the Henry Meyer land in Section 10, Haddon Township. No. 1 John Rose estate, drilled by J. A. MacDonald and others in the NW, Section 32, Turman Township, was dry at 943 feet. Same parties have started No. 1 Charles McKee, in the SW, Section 5, Gill Township. O. A. Thayer's No. 1 on the H. H. Wilson lease, in the NW, Section 35, Turman Township, was dry at 832 feet.

Vanderburg County.—A third well was reported drilling on the County Poor farm in Section 33, Center Township. John R. Knapp and others are starting No. 3 Oscar Euler, in the SE, Section 29. The first well of the Maxwell Petroleum Co. on the George Hornby lease in the SE, Section 32, started at 150 bbls. Same company is starting a second well on this lease. R. J. Rendall has begun work on No. 3 Theodore Kinder, in the NW, Section 33. Knapp and Drake are drilling No. 1 Fred Kreiger, in the SW, Section 28.

Vigo County.—No. 22 William Riggs, drilled by the Siosi Oil Corp. in the SW, Section 32, Prairie Creek Township, is shut down at 2,114 feet.

In Pike County, Claude E. Noble and others' test, in the northwest corner of the Edward Adams farm, SE, Section 17, Washington Township, showed 1,500,000 feet from 1,040-41½ feet. Indiana Southwestern Gas Corp.'s test, 320 feet from the south line and 532 feet from the east line of the C. Bradfield farm, in the SE, Section 18, same township, was dry at 1,150 feet. In Logan Township, same county, Charles L. Diver and others abandoned No. 1 on the Glendora Robling farm, SE, Section 14.

ILLINOIS

Frank Ellison and others' test, 200 feet from the north line and 800 feet from the west line of the Abe Pleasant farm, in the NW, Section 36, Robinson Township, Crawford County, showed an initial of 7 bbls. at a depth of 1,150 feet.

KENTUCKY

In McLean County, Hupp, Duff and others drilled in a 51-bbl. producer in No. 1 on the B. W. Morgan farm, in the Maxwell Pool. Ott Nethers and others' second test, 1,000 feet from the south line and 800 feet from the west line of the Fanny Foley farm, 1½ miles northeast of Livermore, was a dry hole. William Stevenson's test on the Hacket heirs' farm, 1¼ miles northeast of Livermore, was also a dry hole at 1,400 feet.

In Daviess County, S. M. Sherman's No. 3 well, 400 feet from the south line and 600 feet from the east line of the J. T. Mayfield farm, in the Red Hill district, produced an initial of 75 bbls., and No. 4, same farm, produced an initial of 70 bbls. in five hours, after a shot. George C. Staves and others found a dry hole on the Martin Weaver farm, in the Utica Pool. Jetson Oil Co.'s No. 5 well, 150 feet from the south line and 600 feet from the west line of the S. Hinton 62 acres in the Jones Pool, produced an initial of 5 bbls. at a depth of 600 feet. Onsel Brothers and others' No. 3, on the W. L. Taylor farm, in the Burton Pool, was a dry hole.

In Ohio County, Creek Drilling Co. drilled a dry hole in No. 6 on the Smith farm, in the Cave Hill Pool. B. & B. Oil Co.'s No. 7 well, 475 feet from the north line and 1,050 feet from the east line of the James Greer farm, in the Whittaker Pool, which produced 25 bbls. initially. S. R. Nigh and others drilled a dry hole, 600 feet from the south and east lines of the A. P. Kelley 340 acres, in the Deanfield Pool, at 720 feet, No. 18 on the farm.

In the Niagara Pool, in Henderson County, Imperial Oil & Gas Products' No. 3 well, on the Aaron Freeman farm, produced 24 bbls. initially.

Kansas

(Continued from Page 49)

the Public Service Commission, potential production tests in the Ritz-Canton-Decker Field were commenced on November 10 at 7 a.m. This is expected to result in a complete revision of the potential figures and it is also expected that it will be necessary to adjust percentages of allowable production to the new potential figures. It may also be necessary to adjust the percentage of allowable production to the pipe line nominations.

Cowley County

Deal Oil & Gas Co.'s No. 1 Cowalt, NW cor. SW SW SE Section 22-32-4, was completed for 100 bbls. of oil from 2,344-46 feet.

Ellsworth County

Sinclair Prairie Oil Co.'s No. 2 Stratman, SE cor. SW Section 1-17-10w, is a location. Henry and others' No. 1 Aremsman, C SW SW Section 10-15-7w, is a location. Derby Oil Co.'s No. 1 Ploog, NE cor. NW SE Section 12-17-10w, was dry and abandoned at 3,329 feet.

Greenwood County

J. Davisson and others' No. 1 Frankhouser, NE cor. NW Section 28-22-12, is a machine. Absher and Rex's No. 1 Hughes, NE cor. SE Section 26-24-12, is a machine. Mendenhall and others' No. 4 Johnson, NE cor. NW NE NE Section 8-25-13, is a machine. Gardner and others' No. 1 Johnson, NE cor. SE NW Section 8-25-13, is a rig. Morrison and others' No. 1 Gilroy, SE cor. SW NW Section 7-25-13, is a location. Zerberger's No. 1 Huber, SW cor. NW Section 6-25-11, is a machine. Ward McGinnis and others' No. 1 Holland, NE cor. SW Section 32-23-11, was drilling at 600 feet. Gore and Phillips Petroleum Co.'s No. 3 Brothers, NW cor. SE NW NW Section 32-23-11, was completed for 40 bbls. from 1,866-90 feet. Mathews & Rex's No. 3 Newswanger, NW cor. NE SW Section 8-24-12, was completed for 25 bbls. from 1,724-32 feet.

Harvey County

Phillips Petroleum Co.'s No. 1 Weibe, NW cor. SW NW Section 30-23-2, is a rig.

McPherson County

Detrick and others' No. 1 Unruh, SW cor. SE NE Section 21-21-3w, is a location. Gled and Shell Petroleum Corp.'s No. 1 Neufeldt, NW cor. NE SE Section 21-21-3w, is a location. Same company's No. 1 Sperling, SW cor. NE NE Section 28-21-3w, is a location. Holcomb & Turner's No. 1 Waltner, SW cor. NE SE Section 19-21-2w, is a location. Harris & Hoan's No. 3 Overman, SE cor. Section 20-19-1w is a location. Palmer & Phillips Petroleum Co.'s No. 3 Winn, SE cor. NW Section 1-20-1w, an old well drilled deeper, was completed for 996 bbls. from 3,440-44 feet. Derby Oil Co. and Sinclair Prairie Oil Co.'s No. 1 Lacquement, NE cor. NW SE Section 20-19-1w, an old well drilled deeper, made 144 bbls. of oil from 3,405-21 feet.

Sedgwick County

Covell and others' No. 1 Rapp, NE cor. Section 21-26-2, an old well drilled deeper, was shut down at 3,315 feet.

Woodson County

Theta Oil Co.'s No. 5 Shaffer, SW cor. NW SE Section 31-23-14, is a location.

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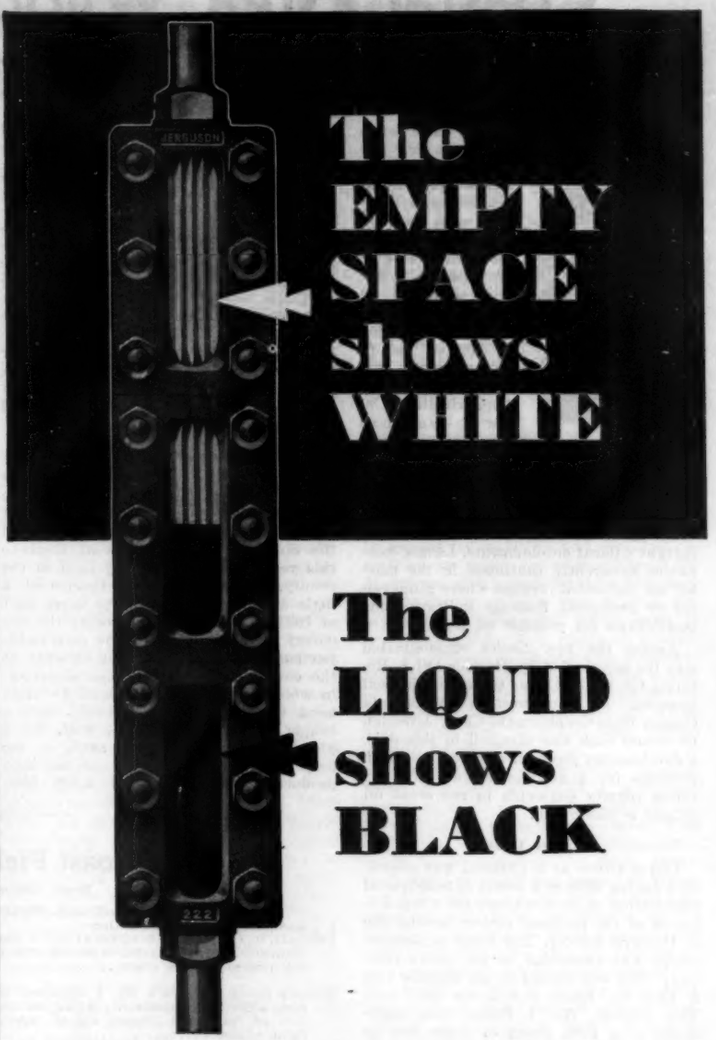

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Steady Extension of Conroe Producing District; Coastal Area Wildcatting Play Continues

By NEIL WILLIAMS
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Nov. 21.—The development and wildcatting play which has been going on in the Texas Gulf Coast district showed no abatement the past week. Activity in the Conroe area of Montgomery County resulted in an increasing number of completions with a further steady extension of productive territory. Approximately 30 new operations were started, scattered over the coastal district, the majority of these being on the Texas side of the line. Blocking and trading of leases was featured by the completion of several transactions which call for additional important wildcat developments. Larger companies apparently continued in the market for unlimited acreage where geophysical or geological findings indicate some possibilities for possible oil reserves.

Among the new trades consummated was the acquisition by Humble Oil & Refining Co. of the Citrus Grove geophysical prospect in southwestern Matagorda County from Cockburn Oil Corp. Although no actual cash was involved in this deal, a development program is called for which provides for a graduated scale of overriding royalty payments in the event oil or gas is discovered.

Citrus Grove

Citrus Grove as a prospect was discovered during 1930 as a result of geophysical exploration of the Cockburn Oil Corp. Location of the prospect centers around the J. Criswell Survey. The block of acreage which was assembled by the above company first was turned to the Empire Gas & Fuel Co. which drilled one deep test. This wildcat, No. 1 Boker, was abandoned at a total depth of 6,460 feet in heaving shale. It encountered several showings and in a sand at 6,248-52 feet blew out and was out of control for several days. Attempts to complete a well in this sand, however, failed and the hole was deepened. After the abandonment of the first test, the Empire company gave up the prospect as a costly venture and later the acreage again was turned to Harvey Smith and associates of Houston who drilled another deep test without encountering anything and then quit the area, leaving the prospect to the original discoverers, who have held it until now. The showings encountered by the Empire company have been looked upon as conclusive evidence of the existence of a field at Citrus Grove but it has been felt that development of production might prove costly and hazardous.

Near Van Vleck

Another Matagorda County prospect figured in the week's trading when Sinclair Oil & Gas Co. put up $15,000 in cash for an option on the 5,000-acre block north of Van Vleck now owned by R. L. Sprinkle and associates but which recently was acquired from Danciger Oil & Gas Co. In the transaction, Sprinkle and associates agreed to drill a 5,000-foot test. Down to that depth, Sinclair Oil & Gas Co. at any time can take over the well and block on a half interest basis. If production is not found down to 5,000 feet and Sinclair should desire to drill the test deeper, that company can take over the well and block, carrying Sprinkle and associates for a quarter interest.

Location for the first test at Van Vleck is the same one previously made by Danciger Oil & Gas Co. when that company owned the block. That location was No. 1 Turner in the M. Cummings Survey, the check being 4,900 feet from the northeast line and 3,800 feet from the southeast line of the survey. On that location, Danciger Oil & Gas Co. had just spudded when the hurricane of last August blew down the derrick. Danciger moved the rig out and no new work has been done there until now. The present operators have rebuilt the derrick and are rigging up.

Matagorda County Busy

Matagorda County now is one of the "hot spots" on the coast with five live prospects, exclusive of Markham, one of the older fields of the coast, which until the discovery of production at Buckeye this year, has been the only field in the county. While Markham experienced a little drilling play during the latter part of 1931 and early 1932 following the discovery of a new sand on the east flank, particular interest has been directed at the county since the Buckeye discovery, in which United North & South Development Co. completed a 2,500-bbl. well a couple of months ago. That well, No. 1 Stoddard, in a 7,900-foot sand, is the deepest on the Gulf Coast and has been producing steadily around 1,700 bbls. daily. This well came into the spotlight again the past week when water suddenly broke in, production until this time having been pipe line oil. The well late in the week was making 25 per cent water although it has made as high as 55 per cent. Some operators, however, are of the opinion that the water is due to a packer in the bottom of the hole giving way. In the completion of the well, the bottom of the hole was plugged back from a salt water sand to the oil pay by the use of packers and was not cemented, hence the giving way of one of these packers, rather than the intrusion of water into the oil pay, could easily account for the water. This is considered likely in view of the fact that the water came suddenly in large volume.

Other active areas in Matagorda County are Shepherds Mott and Pledger, in each of which drilling is under way. The latter is especially in the limelight at this time as Danciger Oil & Gas Co. is running screen to test a sand showing oil at 6,758-82 feet encountered in its No. 1 W. C. Hunt, W. Coirson Survey, southeast of the town of Pledger. This wildcat happens to be on the Brazoria County side of the line but the prospect is on the Matagorda County line. The test is the first deep hole on the prospect. This prospect, however, is separate from that owned by the Humble Oil & Refining Co. and Gulf Production Co. southwest of Pledger and on which Humble Oil & Refining Co. now is drilling its first wildcat, No. 1 Pierce, Isaac Foster Survey. Including the Danciger block on the line, and on which the opening of another new field is indicated, there would be six live areas for Matagorda County.

Conroe Field

Tidal Oil Co. has taken over active development of its newly acquired holdings in the Conroe Field, where it now is the second largest operator as a result of purchases made within the past three weeks. Transactions by Tidal Oil Co. by which it acquires entire ownership or half interests in approximately 2,500 acres were recorded in the November 17 issue of The Oil and Gas Journal. That company has rigged up for No. 2 Lewis Estate, located 467 feet out of the northwest corner of the Lewis 665.5-acre tract, C. B. Stewart Survey. No. 1 Lewis was started by G. W. Strake, from whom Tidal Oil Co. purchased an undivided half interest in the Lewis tract, and will be completed by that operator on a partnership basis. All future development will be by Tidal. Through the purchase of Heep Oil Corp.'s holdings, Tidal has six producing wells, four of which are owned jointly with Houston Oil Co. The Heep Deal included the Hamman 232-acre lease, C. B. Stewart Survey; the Freeman 36-acre lease, John Davis Survey; an undivided half interest with Houston Oil Co. in the Cartwright 300 acres, John Davis Survey; the Dobbins 100 acres, Ransom House Survey, and the Hooper 56 acres, I.&G.N. Survey. Tidal Refining Co. already is at work on laying a gathering system linking the properties although for the present its oil will be transported to tidewater through one of the two present pipe line outlets at the field.

Three additional wells were completed at Conroe during the week, including Navarro Oil Co.'s No. 1 Rhoden, Wilson Strickland Survey; Southland Oil Co.'s No. 1 Cummings, Wilson Strickland Survey, and Hooper-Rutherford Oil Co.'s No. 2 Hooper, I.&G.N. Survey, Abstract 649. Five other wells are in process of completion as this is written, among which is James Papadakis' No. 1 McDonald, John Davis Survey, which marks a northeasterly key position.

Daily production has been curtailed to below 14,000 bbls. daily from 51 wells, this output being a substantial decline from a top of around 24,000 bbls. recorded during the preceding week.

Completions

Additional completions during the week included Humble Oil & Refining Co. and Gulf Production Co.'s Nos. 9-A Lockwood & Sharp and 4 T. R. Booth, Rabbs Ridge, Fort Bend County, each good for 50 bbls. hourly from the 5,200-foot pay; The Texas Company's No. 2 Polk-Kuhn-Glass, Port Neches, Orange County, 300 bbls. daily, 3,508 feet; Gulf Production Co.'s No. 80 Phoenix, Hull, spraying oil with pressure of 300 pounds on tubing, 3,498 feet; Calcasieu Oil Co.'s No. 38 Watkins, East Hackberry, 750 bbls., 2,976 feet; and Rio Bravo Oil Co.'s No. 403-B "B," Saratoga, pumping 1 bbl. net oil.

Wildcats Abandoned

A number of important wildcats were included in the abandonments, these being Indian Hill Oil Co.'s No. 1 Schweinle, William White Survey, near Huffsmith, Harris County, dry at 6,110 feet; Sun Oil Co.'s No. 1 Peevey-Moore, F. Stoevar Survey No. 4, southwestern Newton County,

(Continued on Page 57)

Gulf Coast Fields and Wildcats

Week Ending November 19

Company, farm and location—	Remarks:
RACCOON BEND—AUSTIN COUNTY	
Callicott et al's (Grant & Baker's) No. 1 Chesley, W. C. White Sur., 150 ft. from NW line and 150 ft. from SW line of 26-acre tract	Washing down to resume drilling after shutdown 3,042 ft.
Humble Oil & Ref. Co.'s No. 8 Woodley, Wm. Harvey Sur., 2,380 ft. southeasterly along SE line from SW cor. of tract and thence 413 ft. northeasterly at right angles	Shale 3,402 ft.; cmtd. 7-in. csg.
DAMON MOUND—BRAZORIA COUNTY	
Intercoastal Oil Co.'s No. 10 Wisdom, A. Darst Sur., 440 ft. from NW line and 170 ft. from SW line of tract	Drlg. shale and lime 2,710 ft.
Sinclair Oil & Gas Co.'s No. 2 Norton (W.O.), P. D. McNeel Sur., 230 ft. from NE line and 303 ft. from SE line of 150-acre tract	Pulling screen to work over 3,651 ft.
H. Wisdom's No. 1 Wisdom, 50 ft. from SE line and 75 ft. from SW line of Blk. 5, Lot A, A. Darst Sur.	Rig.
WEST COLUMBIA—BRAZORIA COUNTY	
The Texas Company's No. 68 Hogg (W.O.), G. Tennille Sur.	T.D. 3,131 ft.; pulling screen to deepen.
BARBERS HILL—CHAMBERS COUNTY	
Joe Bashara's No. 2 Tarbutton (D.D.), Henry Griffith League	T.D. 4,370 ft; sidetracked 3,800-3,920 ft; drill pipe stuck.
R. E. Ferrell's No. 2 Wilburn, Henry Griffith League, 215 ft. W of No. 1 in center of 45-acre tract	T.D. 3,000 ft. in shale; fishing.
Humble Oil & Ref. Co.'s No. 1 Kirby, Henry Griffith League, 208 ft. from S line and 160 ft. from E line of lease	Salt 1,377-1,400 ft.; cmtd. cavity; drlg. cement.
Mills Bennett Prod. Co.'s No. 5 Means, Henry Griffith League, 300 ft. W of No. 4	Drlg. salt and lime 3,389 ft.
Mills Bennett Prod. Co.'s No. 5 Kirby, Henry Griffith League, 400 ft. from W line and 41 ft. from S line of tract	Salt 1,366-73 ft.; cmtd. hole to 1,394 ft.
D. B. McDaniels' No. 6 Wilburn, Henry Griffith League, 240 ft. W of No. 5	Hard sand 916 ft.; losing returns.
Moody Corp.'s No. 1 Ilfrey (W.O.), Henry Griffith League, NW cor. of lease	T.D. 5,308 ft.; to work over.
The Texas Company's No. 3 Lawrence fee, Henry Griffith League, 740 ft. W of E line in C of tract	Drlg. hard rock 1,191 ft.
The Texas Company's No. 2 Wilburn (W.O.), Henry Griffith League, 70 ft. from N line and 330 ft. from E line of tract	Set 47 ft. of 3-in. screen 5,311 ft.; to pump.
The Texas Company's No. 9 Wilburn, Henry Griffith League, 580 ft. E of NW cor. and 50 ft. S of N line	Derrick.
Texas Gulf Prod. Co.'s No. 4 Ilfrey, Henry Griffith League, 894 ft. from E line in C of tract	Drlg. hard shale and lime 3,415 ft.
Texas Gulf Prod. Co.'s No. 11-A Kirby, Henry Griffith League, 1,090 ft. from W line and 225 ft. from S line of "A" lease	Sand showing oil 5,775 ft.; cmtd. 7-in. csg. 5,748 ft.

(Continued on Page 63)

To Seek Show Down on California Curtailment; Situation in Kettleman Hills Is Disturbing

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Nov. 19.—California producers, to use a current slang phrase, are on the spot and the spot in this case is real hot, so hot in fact that the lid may blow off any minute with rather disastrous consequences. Outwardly there does not appear to be any great emergency, but beneath the surface, major companies are desperately trying to establish an equilibrium and thus prevent a repetition of past experiences. Marketers are going into the winter season with a substantially higher price structure but this favorable condition is being gradually undermined by consistent overproduction of crude. To clarify the situation it might not be amiss to say that major companies have been trying to give every ethical producer a break by providing an outlet for all oil produced in conformity with the curtailment program. To accomplish this, major companies have been buying considerable quantities of crude in the open market. This surplus oil is allocated to each buyer, and while physical transfers have been reduced to a minimum, an adjustment is made every month or two so that over a period of time the load is equalized as far as possible.

During the past several weeks some of the majors have run into a snag, due to decline in consumption and lack of adequate storage and are no longer able to absorb excess production on the same basis as heretofore. This has brought the situation to a head with the result that California operators must immediately get in line and reduce production to the established allowable at the earliest possible moment to prevent a downward price revision. Major companies will not be expected to engage in indiscriminate purchases especially when state production is running about 30,000 bbls. in excess of the daily allowable of 440,000 bbls. Executives of the principal California majors have been attending the thirteenth annual meeting of the American Petroleum Institute at Houston, Tex., and have consequently delayed any action on the California situation pending the economic reports of the Institute's subcommittee on statistics and the voluntary committee on economics of the Federal Oil Conservation Board. Elimination of the 30,000-bbl. excess in California daily crude oil production is both necessary and desirable if producers wish to reach the recommended objective and strengthen crude and refined prices.

Show Down Demanded

One of the most important developments in California was the resignation of William Keck as chairman of the Executive Committee for Equitable Proration. This move indicates a show down will be demanded to determine the future status of curtailment. The curtailment program has not been running as smoothly as desired during the past month or so due to the flow tests and the inability of Umpire Pemberton to convince operators of the necessity of reducing production to the allowable. The general breakdown in curtailment during the past five or six weeks does not call for a "new deal" but rather that the curtailment committee must adopt a firm position and advise producers to curtail production immediately to prevent price disturbances during the winter. It is the opinion marketers will be able to weather the storm during the rainy season without cutting prices if state production is reduced to 440,000 bbls.

Several producers have questioned the necessity of cutting crude oil production to the present allowable of 440,000 bbls. as there have not been any great additions to stocks during the past few months. It would seem on the surface there is considerable logic to this argument but there is a tendency to disregard the unequal distribution of production. Some companies have substantially increased stocks during the year while others have been successful in partially liquidating stocks. Unfortunately there has not been any profit from liquidation due to the relatively low prices prevailing. If all of the majors could take a pro rata share of the oil available for allocation the situation would not be so bad but two companies are not able to make additional committments. This places a burden on the remaining marketers with the result that they are approaching the point where they must cut purchases to conserve cash resources. The only way these purchases can be cut down, without unduly penalizing producers, is by immediate elimination of excess production. If this is done quickly, the existing price structure can be maintained during the winter and well into spring by which time it is thought the situation should be well in hand.

Work of Executive Committee

Considering the difficulties under which it has been working, the Executive Committee for Equitable Proration has handled a difficult situation in good shape. In addition to Mr. Keck, who recently resigned as chairman, the executive committee consists of H. P. Grimm, president of Pacific Western Oil Co.; R. A. Broomfield, president of Barnsdall Oil Co.; J. B. Elliott, R. R. Bush, H. P. Greer, H. F. Owen, V. R. G. Wilbur and W. H. Geis. Messrs. Elliott, Greer and Bush represent the Independent Petroleum Association, and Messrs. Owen, Wilbur and Geis the California Oil Producers Sales Agency. In an effort to adjust the difficulty arising from the failure of the Kettleman North Dome Association to ratify the recent reduction of 10 per cent in allowable production of the Kettleman North Dome Field, William Keck, chairman of the Kettleman Operators Committee, appointed a special committee to investigate and report at the earliest possible moment. This committee consists of A. C. McCollough of the Amerada Petroleum Corp., Warner Clark of the Standard Oil Co. and William Reinhardt, general manager of the Kettleman North Dome Association. Discussions have been under way for several days and an early decision is expected.

The Kettleman North Dome Association's position with respect to the advisability of effecting an additional reduction in allowable production, as ordered by the Executive Committee for Equitable Proration on October 1, has weakened the entire curtailment program and is jeopardizing the price structure as several operators in other fields have flatly refused to meet the new program until Kettleman Hills gets into line. It has been the contention of the association that operators developing fee acreage should reduce their allowable daily production from 15,000 bbls. to 9,000 bbls. and thus absorb the total additional curtailment prescribed for the entire field. This contention is predicated on the belief of Kenda officials that operators outside of the unit plan are producing more than their fair share. The association, holding several times as much acreage as those developing fee acreage, naturally desires to see production of the North Dome allocated on an acreage basis. This thought obviously does not click with those developing fee acreage and there is no way of regulating production, except by mutual agreement, as long as there is no waste of natural gas.

Two new wells are expected to be chalked up in the North Dome before the close of the month and unless something unforeseen develops two more should be finished in December. The next well to go on production in the North Dome will be No. 3 Felix of the Petroleum Securities as drilling operations were concluded a few days ago. This potential producer, bottomed at 8,516 feet, has been finished with a 6⅝-inch oil string carrying 1,236 feet of perforated. The string was cemented through perforations at 7,280 feet. The two deep tests in the North Dome both made additional footage during the past week. No. 1 Lillis-Welch of the North Kettleman Oil & Gas Co., in the extreme western part of the structure and outside of the line believed to enclose the potentially productive acreage, is in a black shale at 9,621 feet. This project does not look as hot as a few months ago but still has a chance of picking up the deep sand if the hole can be carried below 10,000 feet. Drilling operations are under the supervision of Ed McAdams, and a deep straight hole may be anticipated. A new deep drilling record may be established before work is concluded either as a result of production or because of unfavorable geological conditions. The last string of pipe landed in No. 1 Lillis-Welch was 6,710 feet of 11¾-inch with the result that the diameter of the hole is plenty large enough to drill indefinitely.

The Kettleman North Dome Association's deep test, No. 38-34 J, is drilling ahead at 8,575 feet, the prevailing formation being a dark gray sand. This project is the deepest well, stratigraphically, to be drilled in the North Dome. It is well over 1,000 feet below the Whepley shale which, until a few months ago, was believed to be the bottom of the Temblor. This well is being carried down as a deep conclusive test, the present intention being to establish the existence or absence of another productive zone below the Temblor. With the bit still in Temblor at last reports it begins to look as though drilling operations will have to be continued to at least 9,000 feet. This deep test is fairly close to the apex of the structure so that if Eocene production is developed below the Temblor operators out on the flanks and plunge of the structure will be obliged to go to 10,000 or 11,000 feet to pick up this horizon. Union Oil Co.'s No. 2 Amerada King, finished last week, began showing water a few days ago but this is believed to be due to a mechanical defect. Tests indicate there is a bad place in the casing just above the shutoff and it is probable the company will undertake remedial work in the near future. A satisfactory water shutoff was effected before the crew drilled into the pay. The Standard recovered a little more of the fish which has been holding up progress in No. 6-29 V, a drilling project in the Middle Dome of Kettleman Hills, but with 6,770 feet of 3-inch and 6,750 feet of 7-inch pipe still in the hole it may be a long time before a complete recovery is effected.

Lost Hills-Belridge

The Associated Oil Co. has started work on the projected deep test to be drilled on the Williamson property in the Lost Hills Field of Kern County in conjunction with the Richfield Oil Co. and material should be on the ground shortly. The company is grading roads and the derrick should be up within two weeks. This is to be a deep test although it is likely if the Temblor is

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	....	.....	.....	.....	116,812	.....
Diesel and gas oil	104,504	14,929	.....	.....	368,126	1,473,198
Gasoline	73,008	10,430	124,774	17,825	6,874,337	11,447,682
Kerosene	....	.....	23,690	3,241	177,062	187,934
Foreign exports—						
Crude oil	86,958	12,423	166,096	23,728	7,123,867	6,261,620
Fuel oil	74,747	10,678	61,860	8,837	6,886,452	11,720,427
Diesel and gas oil	139,218	18,460	.....	.....	2,177,845	3,171,843
Gasoline	....	.....	.....	.....	6,886,909	7,424,557
Kerosene	....	.....	.....	.....	2,542,310	1,627,963
Lubricants	....	.....	.....	.....	.....	36,353
Naphtha distillates	....	.....	.....	.....	129,075	.....
Coastwise-domestic—						
Crude oil	266,750	38,107	177,311	25,330	12,308,300	18,684,581
Fuel oil	....	.....	512,145	73,164	10,156,799	11,443,241
Diesel and gas oil	4,969	710	125,610	17,944	1,146,099	1,314,957
Gasoline	181,059	25,866	231,089	33,013	12,870,603	12,473,472
Kerosene	....	.....	9,309	1,330	142,730	280,718
Naphtha and distillates	....	.....	.....	.....	.....	4,952

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Diesel and gas oil	....	.....	94,374	13,482	650,980	.....
Gasoline	....	.....	67,385	9,626	911,808	883,929
Kerosene	....	.....	.....	.....	152,611	.....
Lubricants	....	.....	7,975	1,139	31,804	35,236
Foreign exports—						
Crude oil	....	.....	111,610	15,944	889,922	410,751
Fuel oil	....	.....	.....	.....	904,079	1,428,731
Diesel and gas oil	....	.....	88,675	12,668	608,007	482,708
Gasoline	41,732	5,962	141,666	20,238	3,442,999	4,056,353
Kerosene	....	.....	72,769	10,394	955,627	802,332
Lubricants	....	.....	.....	.....	30,094	25,693
Coastwise-domestic—						
Fuel oil	89,332	12,762	8,784	1,255	2,555,780	3,105,238
Diesel and gas oil	7,104	1,015	.....	.....	330,118	350,919
Gasoline	109,210	15,601	.....	.....	3,185,899	3,892,562
Kerosene	18,316	2,617	.....	.....	110,039	279,174
Naphtha distillates	....	.....	.....	.....	.....	49,730

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found productive the well will be completed in this formation and an Eocene test delayed until a later date. This exploration work is of considerable importance because if either Temblor or Eocene production is developed in the Lost Hills Field it will mean another battle to keep production within reason. It is possible, of course, that operators in this field may perfect a unit plan but during the past year or so unification and production activities has been a dead subject. Something must be done if substantial production is developed because the Lost Hills Field is several times larger than North Belridge where Temblor production has aready been developed and should consequently be of greater importance. Due to commenable co-operation between operators in the North Belridge Field, this prolific deep sand has not been a disturbing factor. The threat is there, however, and it will require careful handling when production is resumed especially since a second highly productive zone has also been found. The failure to find the Temblor productive in the Lost Hills Field has been rather discouraging up to the present but does not discount its potentialities as none of the tests drilled have been conclusive. Several of these holes were lost because of the inability to exclude the high head water but with this troublesome factor out of the way the aspect may be quite different. From a geological standpoint there is no reason why Temblor production should not be developed at Lost Hills as it is in the same line of folding as North Belridge and Kettleman North Dome where this formation has been found highly prolific. Structural conditions are not quite so favorable at Lost Hills and it might be possible the lack of complete closure between Lost Hills and the South Dome of Kettleman Hills may not have been conducive to a high pressure accumulation.

Midway-Sunset

No. 1 Mascot, a deep test of the Standard Oil Co. in the Midway-Sunset Field of Kern County, is approaching a critical depth and the status of this exploration work may be decided within 10 days. The company is running a formation tester at 9,760 feet and if the outcome is unfavorable the hole will probably be abandoned. This is the deepest hole to be drilled in the Midway-Sunset Field and while the Standard thought it had something higher in the hole this showing, after being mudded off for a year and a half, failed to result in commercial production. During the production a few days ago, the well showed a little gas but nothing to get excited about. The Brookshire Oil Co. is making preparations to complete No. 13 in this field during the week but the outlook is not bright for a large producer. The Brookshire interests would be pleased with an initial of 300 or 400 bbls. as the hole is down only 3,700 feet.

In the Fruitvale Field, the Petrol Production Co. recompleted No. 1 Bloemer flowing 285 bbls. of relatively clean 23.9 gravity oil from 4,000 feet. The completion of No. 1 Bloemer has revived interest in the western end of the Fruitvale Field due to the small cut. The Petrol had difficulty in getting clean commercial production but won out by perseverance and good drilling. The Milham Exploration Co. is making preparations to start another gas well in the Buttonwillow gas field of Kern County. The Milham interests are working on one drilling project in this field but this well should be in a position to make a bid for production within 15 days as it is already down 2,525 feet. The Round Mountain Field of Kern County is showing a little revival of work following a dormancy of several months and may show two completions within three weeks. J. J. Miley has staked location for a new well in the Mount Poso district but derrick construction is not yet under way.

Rosecrans

Barnsdall's No. 2 Trust, an outpost in the western end of the Rosecrans Field of Los Angeles Basin, is on steady production after a short shutdown while a compressor was installed. This well is doing a little better than 100 bbls. per day the oil testing 32.6 degrees and showing a cut of about 10 per cent. It failed to come up to expectations as a fairly good producer seemed assured, the oil sand having the appearance of being the best sand cored in Los Angeles Basin in several years. The well did not have sufficient gas pressure to result in a natural flow but it has opened a new productive zone in the Rosecrans Field. It is the opinion this well will result in additional development especially on acreage more favorably located. This drilling if started will bear watching because correlation work indicates this new sand should be picked up just below the 6,000-foot level on top of the structure.

Playa Del Rey

The most interesting development in the Playa Del Rey Field during the week was the encouraging change shown in the Co-operative Development Co.'s No. 1 Mesmer in the extreme western end of the structure. This well, on acreage adjoining the Union Oil Co.'s Vidor lease, is drilling in Miocene brown shale at 6,176 feet. Careful correlation work indicates that, if the subsurface conditions are comparable, the top of the Nodular shale should be encountered at about 6,500 feet and the top of the conglomerate at approximately 6,650 feet. If this well results in commercial production it will prove the intervening property of the Union Oil Co. as productive. No. 1 Mesmer is at the base of the Del Rey Hills almost 1 mile west of Union's No. 1 Vidor, the most westerly producer in the field. No. 2 Vidor was cemented a few days ago and should be given a production test next week. In the meantime,

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status:
Hines Pet., No. 1 Ocean Park, Los Angeles Co.	8- 2-15	7,414	suspended
Taylor Oil Co., No. 1 Culver, Los Angeles Co.	12- 2-15	6,238	suspended
Co-operative Dev. Co., No. 1 Del Rey, Los Angeles Co.	24- 2-15	6,120	br. sh. drilling
Del Rey Hills Corp., No. 1 Del Rey, Los Angeles Co.	26- 2-15	rig	suspended
Palm Ridge Oil Co., No. 1 Palms, Los Angeles Co.	2- 2-15	2,124	suspended
Lawndale Pioneers, Inc., No. 1 Peck, Los Angeles Co.	20- 3-14	6,378	suspended
Hogan, N. S., No. 1 Hawthorne, Los Angeles Co.	23- 3-14	800	suspended
Baldwin Oil Co., No. 9 Inglewood, Los Angeles Co.	7- 2-14	5,696	recemented
Baldwin Hills Synd., No. 1 Inglewood, Los Angeles Co.	17- 2-14	4,090	suspended
Kyle, W. A., No. 1 Inglewood, Los Angeles Co.	7- 2-14	4,316	testing
Pacific Inv. Co., No. 1 Wilmington, Los Angeles Co.	28- 4-13	rig	suspended
El Dorado Oil Co., No. 1 Puente, Los Angeles Co.	30- 2- 9	2,560	suspended
Jones, W. L., No. 1 Lynwood, Los Angeles Co.	31- 2-12	4,421	sd. sh. drilling
Blinn & Gray, No. 1 Montebello, Los Angeles Co.	6- 2-11	5,060	suspended
Hutcheson & Andrus, No. 1 El Monte, Los Angeles Co.	11- 1-11	1,010	sd. sh. drilling
Yellowstone Oil Co., No. 1 Alhambra, Los Angeles Co.	24- 1-13	3,919	suspended
Smith, J. H., No. 1 Hasley, Los Angeles Co.	32- 5-17	3,212	redrilling
Superba Pet., No. 1 Newhall, Los Angeles Co.	11- 3-16	214	suspended
Ball, W. T., No. 1 Newhall, Los Angeles Co.	34- 3-16	3,582	redrilling
Security Dev. Co., No. 1 Newhall, Los Angeles Co.	31- 5-14	416	suspended
Ajax Pet., No. 1 Newport, Orange Co.	21- 6-10	7,359	suspended
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	1,970	suspended
Mineral Expl. Co., No. 1 Capistrano, Orange Co.	8- 8- 7	3,790	suspended
Orangethorpe Pet., No. 1 Brea, Orange Co.	32- 3-10	4,560	suspended
Shallemiller, M., No. 1 Huntington, Orange Co.	35- 2-11	921	sd. drilling
Spindletop Oil Co., No. 1 Salton Sea, Riverside Co.	26- 7-10	3,590	suspended
Duncan, N. I., No. 1 Sagebrush, Riverside Co.	8- 4- 6	1,157	suspended
Colan Dev. Co., No. 1 Redlands, San Bernardino Co.	25- 1- 2	2,392	suspended
Great American Pet., No. 1 Chino, San Bernardino Co.	18- 2- 8	202	sd. sh. drilling
Mason Oil Co., No. 1 Salton Sea, Imperial Co.	1-17-15	680	suspended
Woods, D. H., No. 1 Salton Sea, Imperial Co.	7-11-16	774	suspended
San Felipe Oil Co., No. 1 Borega, San Diego Co.	25-11- 8	494	suspended
South Bay Oil Co., No. 1 Border, San Diego Co.	31-18- 2	1,243	suspended

the Union is going ahead with preparations to facilitate drilling work on No. 5 Del Rey, an offset to No. 2 Vidor. Due to the marshy condition of this section of the Playa Del Rey Field, considerable preliminary work is necessary before rig construction can be started. The first work started consists of building a road by progressive filling, each dump truck moving a little nearer the location as soon as the dirt has been tampered down. The well head is started by driving a number of piles and the location reinforced with additional dirt and concrete. There was a slight increase in the amount of drilling work in the Long Beach Field and two or three additional new wells will be started within a week or so.

Gulf Coast Fields

(Continued from Page 54)

dry at 7,222 feet; Magnolia Petroleum Co.'s No. 1 Hampil, H. Christman Survey, Fort Bend County, located between the Sugarland and Rabbs Ridge Fields, dry at 6,295 feet; Smith, Adair and others' No. 1 Barnett, O. K. Winn Survey, dry at 5,250 feet; and Shell Petroleum Corp.'s No. 5 Blakely-Winston, Danbury, H.&T.C. Survey No. 14, Brazoria County.

Ascension Parish

Rio Bravo Oil Co. is resuming development at Darrow, Ascension Parish, where it has made two new locations, No. 2 Community, 1,200 feet southeasterly in Section 31-10s-2e, from No. 1, the discovery well, completed last month in a sand at 4,035 feet good for 900 bbls. daily; and No. 1 Gumbel, 4,000 feet west and 250 feet south from the northeast corner of the lease in Section 33-10s-2e. Darrow is owned jointly by Rio Bravo Oil Co. and Gulf Refining Co. The discovery well, located on the bank of the Mississippi River, has been shut in since completion with a pressure of 375 pounds. Since then Rio Bravo Oil Co. has been erecting one 15,000-bbl. and three 1,000-bbl. steel storage tanks, barge loading facilities for movement of the oil by water, and a warehouse and camp site.

Harris County

The abandonment of Indian Hill Oil Co.'s No. 1 Schweinle at Huffsmith, Harris County, marks the quitting of a wildcat which has been closely watched the past several weeks. This wildcat, some 10 miles southwest of Conroe and in a spot along the same Jackson and Yegua shoreline, topped a broken sand and shale in the Yegua around 5,514 feet which showed some gas. A drill stem test was made at 5,514-80 feet, estimated at 1,000,000 feet of gas. Cores down to 5,631 feet had a strong kerosene odor. This is believed to be the Conroe pay. Showings were followed by a little lease play in which Gulf Production Co., United Gas Co. and Kirby Petroleum Co. acquired acreage paying from $5 to $20 an acre. They were sufficient to warrant Mills Bennett Production Co. putting up the money to carry the hole from 5,631 feet to 6,110 feet to "look at the bottom." The latter company also is providing for the drilling of a second test, located approximately 2 miles to the south on the Rice Institute land.

Danbury Test

The Danbury test was quit in salt at 5,040-75 feet. It is the fifth test drilled by Shell Petroleum Corp. on this dome and is the second test to go to the salt, the first test, No. 1 Blakely-Winston, finding the salt at 5,228-55 feet. All tests so far drilled at Danbury have encountered a number of sands and one (No. 1 Blakely-Winston) swabbed some oil and might have made a small pumper in a sand at 1,572-78 feet.

DEATH OF E. R. PATTY

E. R. Patty, for 19 years employed by the Prairie Oil & Gas Co. and recently by the Sinclair Prairie Oil Marketing Co., died in Tulsa on Sunday, November 13, after an illness of 10 days. Mrs. Patty and four children survive. The funeral was held in Independence, Kans., his former home, on Tuesday.

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status:
Standard, No. 1 Santa Rosa Island, Santa Barbara Co.	unsurveyed	4,480	gr. sd. drilling
Lee, W. M., No. 1 Lompoc, Santa Barbara Co.	28- 8-34	....	material
Superior Oil Co., No. 9 Santa Maria, Santa Barbara Co.	23-10-33	600	coring
Equity Oil Co., No. 1 Coal Oil Point, Santa Barbara Co.	24- 4-29	3,750	suspended
Bolsa Chica, No. 1 Coal Oil Point, Santa Barbara Co.	25- 4-29	4,089	testing
Deul and associates, No. 1 Naples, Santa Barbara Co.	7- 4-29	5,134	suspended
Oakburn Oil Co., No. 1 Capitan, Santa Barbara Co.	tideland	2,821	cleaning out
Casitas Oil Co., No. 1 Carpinteria, Santa Barbara Co.	tideland	2,205	br. sh. drilling
Cuyama Oil Co., No. 1 Cuyama, Santa Barbara Co.	12-10-27	1,951	sd. sh. drilling
Cebrian & Perkins, No. 1 Cuyama, Santa Barbara Co.	27-10-26	rig	suspended
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	5,450	suspended
Indian Pet., No. 1 Rincon, Ventura Co.	tideland	50	drilling
Sovereign Oil Co., No. 1 Fillmore, Ventura Co.	23- 4-19	760	sd. sh. drilling
Honolulu Cons., No. 1 Miguelito, Ventura Co.	23- 3-24	1,781	sd. sh. drilling
Wilshire Oil Co., No. 1 Sulphur Mountain, Ventura Co.	20- 4-21	920	br. sh. drilling
Superior Oil Co., No. 1 Timber Canyon, Ventura Co.	13- 4-21	6,512	hd. sh. drilling
Hardison & Temple, No. 1 Santa Paula, Ventura Co.	22- 4-21	219	suspended
International Oil Developers, No. 1 Conejo, Ventura Co.	33- 2-20	2,215	hd. sd. drilling
Las Posas Pet. Co., No. 1 Las Posas, Ventura Co.	22- 2-20	rig	suspended
Strobeck, G. L., No. 1 Ojai, Ventura Co.	34- 4-23	298	suspended
Milham Expl., No. 36 Buttonwillow, Kern Co.	1-28-22	500	cemented
Parman, T. H., No. 1 McKittrick, Kern Co.	22-29-21	4,810	br. sh. drilling
Welport Oil Co., No. 2 McKittrick, Kern Co.	19-29-21	760	br. sh. drilling
Osona Oil Co., No. 2 McKittrick, Kern Co.	27-29-21	3,031	plug 2,943 ft.
General Pet., No. 1 Belridge, Kern Co.	30-28-21	8,260	suspended
Wallace, K. C., No. 1 Belridge, Kern Co.	32-29-21	4,222	suspended
Cumberland Oil Co., No. 2 Devils Den, Kern Co.	17-26-18	3,263	suspended
Hallaway, A. S., No. 1 Devils Den, Kern Co.	11-25-18	913	suspended
Hannah, Tom, No. 1 Devils Den, Kern Co.	25-25-18	3,516	cemented
Pyramid Hills Oil Co., No. 1 Devils Den, Kern Co.	24-25-18	2,191	hd. sd. drilling
Fowler, F., No. 1 Blackwell Corner, Kern Co.	15-26-19	3,170	suspended
Kingsburg Expl. Co., No. 1 Kingsburg, Fresno Co.	30-16-23	2,970	suspended
Graham & Loftus, No. 1 Raisin City, Fresno Co.	20-15-18	mtl.	building rig
Kent & McDonald, No. 1 Carrizo Plains, San Luis Obispo	3-32-22	3,535	br. sh. drilling
Emerich Oil Co., No. 1 Carrizo Plains, San Luis Obispo	22-32-22	1,841	suspended
Indian Dome Oil Co., No. 1 Edna, San Luis Obispo Co.	26-31-12	3,352	suspended
Paso Robles Oil Co., No. 1 Edna, San Luis Obispo Co.	27-27-11	4,191	suspended
Schilling, C., No. 1 Atascadero, San Luis Obispo Co.	1-29-12	1,650	suspended
Shell, No. 1 San Miguel, San Luis Obispo Co.	4-25-12	3,525	br. sh. drilling
Pacific Inland, well No. 1, Monterey Co.	19-23-15	2,441	suspended
Brown, W. F., No. 1 Parkfield, Monterey Co.	15-23-14	1,051	suspended
Gasos, E. B., No. 1 Corcoran, Kings Co.	7-21-21	6,197	suspended
Woodward, Glen, No. 1 Dudley Ridge, Kings Co.	32-22-20	775	suspended
Scott Bros. Drlg. Co., No. 1 Dudley Ridge, Kings Co.	18-22-19	1,843	suspended
Irma Investment Co., No. 2 Dudley Ridge, Kings Co.	7-23-20	1,224	suspended
Triune Oil Co., No. 1 Dudley Ridge, Kings Co.	5-23-20	1,098	cleaning out
Dudley Dome Oil Co., No. 1 Dudley Ridge, Kings Co.	9-23-20	1,470	gr. sh. drilling
Eagle Oil Co., No. 2 Dudley Ridge, Kings Co.	15-23-20	1,342	suspended
Knudsen & Schmidt, No. 1 Reef Ridge, Kings Co.	36-23-17	5,812	cleaning out
Kettleman Ridge Oil Co., No. 1 Avenal, Kings Co.	10-23-16	1,148	suspended
Magee & Stone, No. 1 Alpaugh, Kings Co.	34-24-22	5,060	suspended
Western Resource Corp., No. 3 Dudley Ridge, Kings Co.	12-23-22	1,840	suspended
Ducor Pet. Co., No. 1 Ducor, Tulare Co.	14-24-27	2,200	suspended
Inland Valley Oil Co., No. 1 Visalia, Tulare Co.	24-17-24	2,092	suspended
Sheldon & Gholson, No. 1 Porterville, Tulare Co.	34-22-27	962	suspended
Hayman Oil Co., No. 1 Porterville, Tulare Co.	17-23-28	380	suspended
Ellis & Sanford, No. 1 Tulare Lake, Tulare Co.	20-24-23	1,490	suspended
Napa Oil Co., No. 1 Griffith, Napa Co.	7- 8- 3	3,244	sd. sh. drilling
Oakdale Oil Co., No. 1 Oakdale, Stanislaus Co.	5- 2-10	4,813	sd. sh. drilling
Hilderbrandt, R., No. 1 Crows Landing, Stanislaus Co.	36- 6- 7	1,130	suspended
Rushing Oil Co., No. 1 Waterford, Stanislaus Co.	20- 3-13	2,650	sd. sh. drilling
Pacific Northern Oil Co., No. 1 Guinda, Yolo Co.	23-12- 3	3,045	suspended
Bergman, Harry, No. 1 Dos Palos, Merced Co.	12-12-11	642	sd. sh. drilling
Los Banos Pet., No. 1 Los Banos, Merced Co.	26-10- 9	rig	suspended

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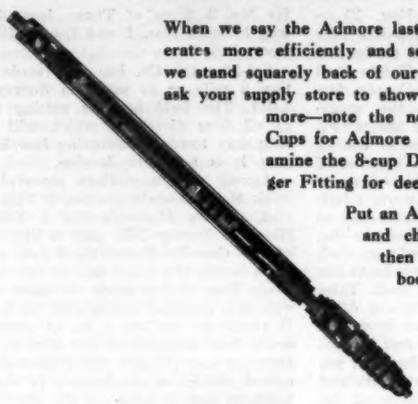

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Tuleta Extension Test Looks Like an Oil Well; Well Saturated Core in Laurel Pool Test

By B. D. STEVENSON
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Nov. 21.—Dirks Brothers' No. 1 fee, a half a mile west of production in the Tuleta Pool in Bee County, furnished the sensation of the week when, after testing dry in the sand of the field and counted by many a failure, it deepened to the top of the Yegua and on drill stem test looks like an oil well. Total depth is now 4,302 feet and it went into the new sand at 4,286 feet. It got the Tuleta sand at 4,109-21 feet and got it dry and looked like a sure failure and indicating no westward extension of the pool. The Texas Company has 160 acres between this well and the discovery well of the field with one producer, its No. 1 Cox, an offset to the discovery well.

On drill stem test in the new sand the Dirks well began making gas in 10 seconds and at the end of 5 minutes it was making a good volume of gas and spraying a little oil. When the drill was run out it had 15 fourbles of 44 gravity oil at 66° F.

This throws an entirely new element into operations in that county. Cosden's No. 1 Sultenfuss, a few miles to the east, made a considerable volume of gas and in the top of the Yegua but was not completed and otherwise the Yegua is not producing in Bee County though it is producing in many pools in the Mirando district and also in the Callihan Pool in McMullen County.

Dirks Brothers are arranging to set casing and early this week it should be ready to drill in and test. If it makes a well in keeping with the showing on drill stem test it will start a new line of development as none of the tests in the immediate vicinity of the producers in the field have gone to the Yegua.

The two tests to the southwest, Wallace and Bowles' No. 1 Harris, and Taber & O'Neill's No. 1 Harris have spudded in and set surface casing and it will be a couple of weeks before they get down to the pay horizon.

Laurel Pool in Webb County

Hamill and Hamill's No. 1 Lloyd, on the C. E. Wolcott lease, 3,600 feet north of the nearest producer in the Laurel Pool, at 2,206-10 feet, got a well saturated core. The test is standing but proves that the sand extends that far to the north. The location is in the southern edge of Survey No. 23. The discovery well of the field got the sand about 25 or 30 feet deeper and, elevations considered, No. 1 Lloyd is getting the sand about 73 feet higher.

It is understood a test a little to the east of it is being negotiated where they get the sand a little farther down the dip and get it thicker. Hamill & Hamill's No. 1 Lloyd is the first test to be drilled at considerable distance from the producers of the field to reach the pay sand.

During the week Montex's No. 1 B. Rosenberg, in Block 5, of Survey No. 271, a quarter of a mile or so west of the nearest producer, got the sand and set casing and should be ready to drill in this week. Also South Texas Oil Co.'s No. 2 State of Texas, in Block 10, Survey No. 270, got the sand and is about ready to drill in and location was made for No. 3 State of Texas, located half way between Nos. 1 and 2, and 330 feet east of them.

Sal-Mar Oil Co. has also made location a mile or so south in Survey No. 1,011. The field is thus getting tested in all four directions which will go a long way towards indicating how important it is going to develop.

Among the completions reported this week is P. Rosenberg's No. 1 Vela, carried also as Montex's No. 1 Vela, in Block 4, Survey 267, just a little west of the Carolina-Texas Field and a few miles north and some east of the Laurel Pool. That it was likely to make a gas well was reported a couple of weeks ago. It seems to confirm a lot of geological work done recently on the area by Don Danvers and changes the previously accepted geology of the district. In sand at 1,824-36 feet it came in for 25,000,000 feet of gas with 500 pounds pressure. This gas well gives some new definite information on that part of Webb County which will play a very important part from this on.

Saxet Field in Nueces

Six tests were below 4,000 feet and two others below 3,000 feet in the Saxet Field at the close of the week with several other locations made. The eight tests drilling are due for early completion and should normally add around 50 per cent at least to the production in the field. A number of major companies not owning anything in the Saxet area have lately been attracted to the field to give it some study. Humble Oil & Refining Co. has been doing some geophysical work in the district.

William F. Morgan and O. R. Seagraves interests represented in the Gulf Coast Oil Co. and Gulf Port Oil Co. recently started considerable new drilling and a number of rigs in the field and have already completed some producers and were followed soon by Titus & Calloway who have three tests drilling and derricks up for two others, and Gibson Oil Co., also a newcomer in the field, has one test drilling. Capps & Smith of Houston are also new people there with one test about to spud in. Houston Oil Co. and Saxet Oil Co. are old operators there. Each has one test drilling but in each instance it is an offset.

Houston Oil Co.'s No. 1 Walton is at 4,800 feet; Saxet Oil Co.'s No. 9 Dunn at 4,034 feet is coring sand; Titus & Calloway's No. 1 Legasse is in sand at 4,080 feet; No. 2 Legasse is drilling at 4,060 feet, and Gulf Coast Oil Co.'s No. 2 Bessie Elder with casing set at 4,564 feet, are all likely early producers. Gibson Oil Co.'s No. 1 Morgan at 3,754 feet, O. R. Seagraves, trustee's No. 1 Legasse at 3,416 feet, and Titus & Calloway's No. 1 Hutchins at 3,025 feet, should follow in short order.

This field has many sands proven, with lots of gas production and relatively small oil production. It seems now that the big chemical plant that was to be built on land near the field, and which bought extensive gas rights in the Saxet Field, is not likely to be built for some time. It eventually will make a big market for gas but the concern has other operating plants able to meet all present market demands.

One of the most important completions expected soon is the Houston Oil Co.'s No. 1 Walton, in the northeast end of the field last reported at 4,800 feet and drilling. There are only two producers in the field in the 4,800-foot sand both recent completions and one of these is the Oso Drillers' No. 3 Roark, two or three locations east of No. 1 Walton, completed at 4,886 feet and with considerable gas and making now about 30 bbls. It barely topped the sand. No. 1 Roark, two or three locations east of it, went into that sand with a big showing on drill stem test but trouble developed and it was later plugged back to the 4,300-foot sand and completed there. Operators were cautious with No. 3 for fear of drilling too deep. The other 4,800-foot test is a few miles west.

Houston Oil Co.'s No. 1 Walton is a south offset to Tule Lake Oil Co.'s No. 1 Hocker & Sevier which stopped in the 4,300-foot sand. No. 1 Walton got that sand but is going down to find out what there is in the lower levels. As yet there is uncertainty as to what the ultimate possibilities of the 4,800-foot sand are and No. 1 Walton may disclose it. If No. 1 Walton closes good thickness to the 4,800-foot sand Oso Drillers will go back in and deepen their No. 3 Roark. Also considerable new drilling will at once start in that part of the field.

Coastal Wildcats

F. A. Lain's No. 1 Vernon Porter, a much watched wildcat in northeastern Jim Wells County, as recently reported, got the top of the Marine Oligocene at 2,759 feet with an elevation of 110 feet and that is amply high. It was the formations in the next 500 to 600 feet that were counted on to "pay off." It had a dry sand at 3,102-08 feet and a sand showing gas and good for a well at 3,137-46 feet and another sand at 3,172 feet, results not yet reported.

Another wildcat joined the list in Starr County. W. P. Chancellor's No. 1 Guerra in Share 6 of San Jose grant, spudded in and made the first few hundred feet. It is about 300 feet from the east line of Starr County and about 7 miles from the north line of the county. Many major interests blocked heavily around that territory. California Oil Co. bought a big block in southwestern Brooks County which corners on northeastern Starr County. On the California block are two gas wells drilled by Ed East and completed at about 1,200 feet and since then East has drilled another on acreage he had nearby.

Chancellor has a chance at the same sand, though his test is scheduled to drill much deeper unless it gets profitable shallow production.

The other much watched wildcat in that county, Jim Cloud, Inc.'s (Great Plains Oil Co.) No. 1 Sanchez, in the northwestern part of the county, is rigging up, and A. C. McGahhey is about to get started in the southeast corner of the county, three-quarters of a mile from the river and the east line of the county.

Balcones Fault Zone

Cargill's No. 1 Damereau, in Caldwell County, deepened to 2,018 feet and swabbed 75 bbls. of oil in a few hours from the chalk. It is in the district in Caldwell County described last week 1½ miles southwest of Webster's No. 1 McCrory, completed a few months ago as a crevice well and a half mile northeast of The Texas Company's No. 1 Branyon drilled some few years ago and also a crevice well.

Laredo District

Clark & Cowden, who found gas production in wildcat territory in Jim Hogg County recently, have drilled a second test, 4,000 feet south of it, and got an odor of oil but no production. Their No. 1 Vela, several miles southeast of the Henne, Winch & Fariss Pool and several miles northeast of the Randado Pool, had bad luck. It set casing but the seat gave way and the casing dropped, undoubtedly shutting off much of the sand. The casing was ripped and it made 6,000,000 feet of gas with 400 pounds pressure. It has since built up to 600 pounds and is spraying a little oil. It was completed at 2,270 feet. Their No. 1 W. Allen, 4,000 feet south, at 2,395 feet, had the sand and an odor only. It is understood they plan another test to the north of the No. 1 Vela.

Winch & Billings' test, several miles southwest of the Randado Pool and 3 miles east of the south end of the Escobas Pool in Zapata County, also in wildcat territory, has been completed for 1,500,000 feet of gas at 1,673 feet with 630 pounds pressure.

Blair and Sons' No. 1 Montemayor, a couple of miles east of the north end of the Escabos Pool, that looked like something for a time at 1,701 feet, has finally

(Continued on Page 62)

Wildcat Operations in Southwest Texas

Week Ending November 19

ARANSAS COUNTY

Company, farm and location—	Remarks:
Grayburg Oil Co.'s No. 1 McCampbell, 150 ft. from N and E lines of Lot 1, Blk. 58, McCampbell ranch	Ready to spud.

ATASCOSA COUNTY

American Central Oil Co.'s No. 2 Mary McConnell, 150 ft. W of E line, 300 ft. S of No. 1 Blk. 138, W. C. M. Baker Sur., 3 miles W and 6 miles S from Somerset	T.D. 1,660 ft.; rig moved off.

BANDERA COUNTY

F. A. Brown's No. 1 R. B. Watson, 600 ft. N of con. of S line of Sec. 71	T.D. 350 ft.; fishing.
E. A. Parkford's No. 1 Duke, 200 ft. from S line, 150 ft. from W line of Sec. 7, G.C.&S.F. Sur.	Moving in rig.

BASTROP COUNTY

J. E. Emanuel's No. 1 H. Klemm, 317 ft. from W line, 300 ft. from S line of tract in R. S. Teal Sur.	Rigged up and standing.
Liberty Oil Co.'s No. 1 Lizzie Davis, 1,300 ft. to NW lines, 450 ft. to SW lines of 50-ac. tract in Geo. A. Stovall Sur.	Location.
Marts & Beavens' No. 1 Smith, 7,450 ft. to NW lines, 1,350 ft. to SW lines of J. Burleson Sur.	Rigging up.
Ogden & Reed's No. 1 Miers, beginning at the intersection of the C. L. Riddle and W. M. and Viola Riddle tracts, thence W 300 ft., thence S at right angles 150 ft. in W. H. Leech Sur.	Location.
Properties Trading Co.'s No. 1 Henry Freitag, 400 ft. from SE line, 1,800 ft. from NE line of P. Conley Sur.	T.D. 2,118 ft.; standing.

(Continued on Page 67)

Julesburg Basin May Have a Major Discovery; Rangely Dome Well Estimated 300 Bbls.

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Nov. 21.—The Ramsey Petroleum Co.'s wildcat in the Buckingham district, in Julesburg Basin in northeastern Colorado, encountered oil in a second sand and gives indications of being a major discovery. A scramble for leases immediately ensued and a big play in that area is imminent. Two new operations in Walden district in Jackson County are reported under way. The California Co.'s deep test on the Rangely Dome is believed to be coring in the objective and production men estimate the well is good for 300 bbls. from horizons just above.

Experiments on wells showing water in the southwestern edge of the Hobbs Pool in New Mexico indicate the water is coming from the top of the white lime above the pay. One well, after running packer, increased from a nominal production to 240 bbls. per day. The Humble Oil & Refining Co. completed one well in the Hobbs Pool for 11,880 bbls. Three new locations were made.

One failure was reported in the Osage Field, in Wyoming, another well is nearing completion and one location was made. One small producer was completed in the Pilot Butte Field.

In Montana, the Carbon Oil & Gas Co.'s No. 1 McMinn, which will extend the Dry Creek Field half a mile, found 10 feet of saturated sand in the top of the Dakota. Santa Rita Oil Co.'s No. 1 Yanck promises to be the best well so far completed in the new Cut Bank district and swabbed 248 bbls. in 24 hours. One location was reported.

Washington, Oregon and Utah operations report only routine progress.

COLORADO

The long search for an oil pool in the Julesburg Basin in northeastern Colorado appears to have been rewarded with success at last. Ramsey Petroleum Co.'s No. 1 St. Anthony (Tighe), SW NE SE Section 15-7n-59, in Weld County, 13 miles northeast of the Greasewood producers, 5 miles southeast of Buckingham and 20 miles north and a little west of Fort Morgan, found saturation in a sand below the Muddy and gives indications of being a big well. The interest is intense and the long-expected boom for that area appears now to be in evidence.

The Ramsey well was spotted on a block of 6,800 acres which largely had been passed up by the major companies in their leasing campaign one to two years ago. Manning & Terry, drilling contractors, who put down the well with a rotary outfit, and Greeley Oil Co., which furnished a derrick and considerable equipment, have interests in the well. Three weeks ago the test topped a sand at 6,686.6 feet and was cored to 6,695 feet. While unloading the mud it cleaned itself and for several days made around 6,300,000 feet of gas per day and in 12 hours, when shut in, built up a pressure of 1,635 pounds. The gas was very wet and the saturation appeared to increase during the period in which it was allowed to blow. There was a question whether this horizon was the Muddy, the producing horizon at Greasewood, or the Dakota sandstone. C. L. Wagner, geologist for the Ramsey company, and several others expressed the opinion it was the Muddy, while others who compared samples believed the Muddy was missing and that the gas came from the Dakota. The importance of this lies in the fact that up to this time the Dakota has not yielded oil in commercial quantities in the several tests drilled in that area. The Muddy is a lenticular sand while the Dakota (the Wilcox sand of Oklahoma) is a blanket sand, much thicker and a better potential reservoir for oil.

When the test failed to blow itself in as an oil well, mud was run and the gas was killed to drill deeper. The core showed a little more sand containing saturation and then gradually changed into a sandy shale, with the shale increasing. The bottom of the horizon was placed at approximately 6,710 feet. Drilling then was resumed in shale and at 6,757 feet another sand was picked up. This evidently is the Dakota, although there remains a possibility that it is the Lakota. The sand was drilled 1 foot and then the core barrel was run. The most reliable report is that 3 feet of core was recovered, showing heavy saturation. The core was taken away from the well and shipped, presumably, to Tulsa. Another core barrel was rushed in from Casper and Tuesday another core of 18 inches was reported taken from the hole. This is said to have come out bleeding live oil. While circulating, oil began showing on the slush pit through 6,700 feet of mud and operations were immediately suspended. Connections are now being put on the well, but future plans have not been announced.

A scramble for leases immediately started. One desirable block not far away came into the limelight and three requests for options on it came by telephone from Tulsa, but it was too late. Another deal had been tentatively closed. The Lee and Lusby block just south of Fort Morgan, the Middlemist Dome, in Washington County, the Colorado Associated Oil Co.'s block northwest of Fort Morgan, the Tulsa-Fort Morgan Petroleum Co.'s block to the north of the Ramsey well, the Fort Morgan Oil Co.'s block north of the Colorado Associated block, and others immediately began to attract attention and a number of tentative deals have already been reported. The extent of the play may be judged from the fact that the basin is about 150 miles square and during the past three years more than 2,000,000 acres have been leased in that district. The most solid blocking is in the Buckingham-New Raymer district, surrounding the Ramsey test where the major companies have more than 100,000 acres

(Continued on Next Page)

Interesting Test in South Turner Valley Field May Extend Producing Area to South

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Nov. 19.—Deliveries to the refineries from the Turner Valley Field in October aggregated 46,409 bbls., compared with 45,869 bbls. in September. Production of the field for the 10 months of 1932 totals 608,335 bbls. The October production included deliveries to Imperial Oil, Ltd., of 36,141 bbls. of crude naphtha and 4,066 bbls. of light crude oil, a total of 40,207 bbls. Deliveries to Regal Oil & Refining Co. amounted to 1,498 bbls., and those to the Bell Refining Co. totaled 4,704 bbls.

With the completion of the flow and pressure tests by the Turner Valley Gas Conservation Board November may show some gain in production; since the testing operations have interfered to some extent with production.

New Turner Valley Test

An important new test has been spotted in the South Turner Valley area by the Union Drilling Co. of Calgary. Location is in LSDs 7-8, Section 21-18-2w5, on acreage secured from the Calgary & Edmonton Corp. The test is about a mile south of the nearest drilling operations. William Maughan and George Muir are the active heads of the company.

Since the first production was secured in the Central Turner Valley the producing area has been steadily working southward. Two important developments were the drilling of Home Oil Co.'s No. 1, which got the first production in Section 20-19-2w and more recently Mercury Oils' No. 1, which extended the field as far south as Section 4. The earlier drilling indicated a probability that the first Central Turner Valley wells had got the structure at the high point and that the formations dipped toward the south. Later, Merland Oil Co.'s No. 1, in Section 27-18-2w5, upset this theory by getting the lime at a higher point than some of the producing wells farther north. Union Drilling Co.'s No. 1 will represent a long jump from Merland's No. 1, which is the nearest producing well. The new test is expected to spud in before the end of December.

South Turner Valley

Anaconda Oil Co.'s No. 2, LSD 15, Section 28-18-2w5, offsetting Merland Oil Co.'s No. 1 producer, is working on derrick and camp. Drilling is in charge of Mark and Millard Hovis who put down British Dominion's No. 1 deep test to a then record depth of 6,600 feet several years ago. Anaconda's No. 2 will be primarily a test of the Dalhousie sand.

Central Turner Valley

In the Central Turner Valley, McLeod Oil Co.'s No. 4 deep test, LSD 16, Section 1-20-3w5, is reported drilling new hole in a hard formation below 7,750 feet after straightening a shot section. The drill is thought to have gone through the great thrust fault below the Madison limestone. The test is in good shape for still deeper drilling and 9,000-foot cable is being secured.

Red Coulee Field

In the Alberta end of the Red Coulee Field, Vanalta Oils' No. 5, LSD 4, Section 4-1-16w4, has finished in the Vanalta sand below 2,400 feet, approximately the same depth as the other four wells in the Vanalta group. It is expected to make around 40 bbls. a day on the pump. The location is 220 feet north of the Montana boundary.

Keho Lake Test

In the Keho Lake district, northwest of Lethbridge, Hudson's Bay Oil & Gas Co.'s No. 1 Keho, LSD 2, Section 17-11-22w4, has been shot in the Madison lime and is now being cleaned and tested. The drill got the lime, with small shows of oil and gas, at a depth between 4,917 and 4,920 feet, and drilling was continued to 4,942 feet. Salt water encountered a little higher, at this depth increased to such an extent that it rose 1,500 feet in the hole. Drilling was accordingly discontinued and the hole plugged back to 4,926 feet after which the sand in the top of the Madison was shot with 10 quarts. The shot apparently improved the oil and gas showings very little, and though at last reports testing had not been finished, the well appears to be noncommercial in this horizon. If this proves correct, the hole will probably be further plugged back and a thorough test made of the show of heavy crude encountered in the Benton shale horizon at 3,770 feet. It is claimed that a bailer test in this horizon got 24 bbls. in an hour, and a settled production of 40 to 50 bbls. was thought possible. The Benton may be given a shot, as in the earlier test very little gas was indicated with the oil.

Twin River Test

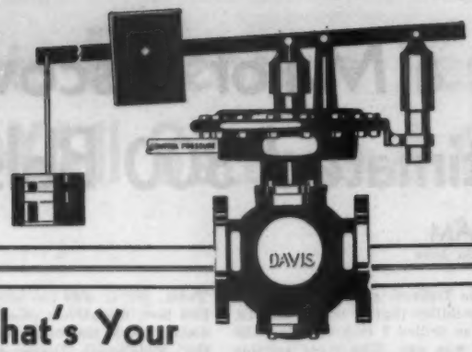
On the Twin River structure southeast of Lethbridge, Nordon Corp.-C. A. Roney's No. 2 Twin River, LSD 11, Section 2-2-20w4, is reported spudding in. Cable tools will be used in the shallow sands to 1,200 feet after which rotary drilling will continue till the Madison lime is reached, around 3,700 feet, with cable tools again used in the producing horizon.

Athabaska Drilling

In the Athabaska district, northern Alberta, Athadome Oils' No. 2, LSD 3, Section 15-66-23w4, is reported drilling. The location is close to Athabaska Landing, and about 80 miles north of Edmonton. F. H. Stover & Son of Chatham are handling the contract.

Test in Manitoba

In the Manitou district, southwestern Manitoba, Commonwealth Petroleums' No. 2 Pembina, LSD 2, Section 26-2-9wPM, is drilling below 2,622 feet. A change in formation was reported recently, and samples have been sent to



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Ottawa for identification. The drill has not yet reached the potential oil and gas horizon in the Winnipeg sand.

Two Hills Structure

On the Two Hills structure east of Edmonton, Frontier Development Co.'s No. 1, LSD 2, Section 1-55-13w4, is reported rigged up ready to spud in. Sheldon Burden Co. of Canada have the drilling contract.

Tests in the Foothills

On the Moose Mountain structure, northwest of Turner Valley, Elbow Oils' No. 1, LSD 11, Section 35-22-5w5, is standing at 3,645 feet, waiting for casing. The hole has been caving and making some water, and casing will be run before drilling deeper. It is in the Blairmore horizon.

East of Turner Valley, Ranchmen's Gas & Oil Co.'s No. 1, LSD 16, Section 13-20-29w, on the High River-Aldersyde structure is reported temporarily shut down after drilling to more than 5,618 feet. At this depth the test is unofficially reported in the Colorado shale formation.

Northern Saskatchewan

In Northern Saskatchewan, Petroleum Engineering Co.'s No. 1 at Hudson's Bay Junction is reported drilling below 344 feet in a very hard formation, in which the standard tools and light rig can make only about 3 feet a day. Small shows of oil and gas have been encountered right along in the last 50 feet or more of drilling.

Ontario Drilling

In the new oil area in Dawn Township, Lambton County, Union Gas Co. has finished cleaning out its three producing wells, two of which are shut in temporarily for lack of tankage. The three wells should make an aggregate of 125 bbls. a day or better.

In the Olga Field, Raleigh Township, Kent County, F. H. Stover & Son's No. 1, Lot 19, Concession 8, is reported drilling.

A Cleveland syndicate is preparing to drill for gas on acreage in Clinton Township, Lincoln County, near Beamsville, on the eastern side of the Niagara Peninsula and in an easterly direction from the main gas fields in Welland and Haldimand Counties along Lake Erie. Showings of natural gas have been found in several localities in Lincoln County. A test drilled to 2,200 feet showed small quantities of gas in the White Medina and Trenton formations. The south end of Clinton Township, where the present drilling is being undertaken, has been regarded as one of the favorable locations. Tentative locations are reported to have been made on the Howie and Hoffman farms, and it is expected a series of tests will be drilled.

Conservation Act Upheld

The appellate division of the Supreme Court of Alberta has given judgment on the appeal of Spooner Oils, Ltd., of Calgary, upholding in all its main features the validity of the Gas Conservation Act under which the Turner Valley Gas Conservation Board has been restricting the production of that field. It is expected that a further appeal will be taken to the Supreme Court of Canada and ultimately to the Imperial Privy Council.

Rocky Mountain

(Continued from Preceding Page)

leased up. The activity extends to the Wyoming line and through Logan County towards the Nebraska line. W. R. Ramsey arrived at the well yesterday by airplane. Several Oklahoma scouts also have come in by plane.

Next to Test

Tulsa-Fort Morgan Petroleum Corp.'s block to the north of the Ramsey well may be the next to complete a test. This company's No. 1 Anthes, C NE NE Section 24-8n-59, 5 miles north of the Ramsey well, is bottomed at 3,318 feet and is underreaming to lower 10-inch. It was drilled to this depth with cable tools. The company definitely states the well will be completed with rotary tools and that work is to be rushed. This is the only active operation in the district at present.

In the Greasewood area, 13 miles to the southwest, Ohio Oil Co.'s No. 1 Butters, C SW SW Section 7-6n-60, which found water in the Dakota and plugged back to the Muddy, is swabbing twice a week and making 30 to 50 bbls. at each swabbing. Manning & Terry's No. 1 Niles, between the Butters well and the Greasewood producers, was a failure in the Muddy.

Adams County

Hills Dome Lease Development Co.'s No. 1 Hills, SE cor. Section 27-3s-64, near Watkins, is shut down at 4,119 feet after drilling plug to within a few feet of bottom.

Larimer County

C. Leonard Smith's No. 1 Union Pacific, SW SE SW Section 31-12n-69, Sand Creek, is bottomed at 172 feet and fishing for tools. It has a show of oil and gas at this depth.

Jackson County

A Denver group has moved a rig to Section 33-9n-78, South McCallum Dome, for a test to the shallow sand. It is about 1 mile west of Continental Oil Co.'s No. 1 Hoye, one of the famous "ice cream" wells in the Walden district. Another operation in the Walden district is in prospect. Oklahoma people are reported to have made a deal for North Park Coal Co.'s tract consisting of the W half NW and NW SW Section 18-9-78 and NE SE Section 13-9-79. This is the only patented tract on the structure and lies mostly between the north and south domes. Arrangements are said to have been made to move in a standard rig from the Wellington Field. Identity of the parties behind the operation has not been disclosed. An unconfirmed report mentions the Ramsey Petroleum Co. as being interested. Continental Oil Co. controls practically all the acreage on the two structures with this exception.

Routt County

The Texas Company's No. 1 Irwin-Carstarphen, NE SE NW Section 5-6n-86, Tow Creek, is drilling at 4,100 feet.

Rio Blanco County

The California Co.'s No. 1 California-Raven, NW SE Section 30-2n-102, Rangely Dome, is officially reported coring at 6,538 feet. The company is not releasing any additional information. From other sources it is reported that at a little below 6,400 feet the formation began to grade into a light creamy pink, and it is believed the coring is now in the Weber proper. For several hundred feet above this depth the hole went through alternating thin streaks of saturated sand and shale. No test has been made below 6,228 feet, but a production man who is well informed, estimates that before entering the Weber proper the hole, if unloaded, would make from 300 to 350 bbls. per day.

Magnolia Petroleum Co.'s No. 1 Titley, NW cor. SW Section 15-2s-96, Piceance Creek, which last week was estimated good for 8,000,000 to 10,000,000 feet of gas in sand topped at 2,953 feet, has not yet drilled out plug after cementing pipe on top of the sand.

NEW MEXICO

Lea County

An encouraging report on the efforts to control the water appearing in some of the wells on the southwestern edge of the Hobbs Pool was received this week. Water in quantities varying from a negligible per cent up to as high as 25 per cent has been reported for some time in about 23 of the edge wells. The area affected principally is in Sections 4 and 5-19-38. Engineers have been working for some time on the problem, taking bottom hole pressures, temperature, etc., in an effort to determine the source of the water. It was generally believed the water was coming from the bottom. Experiments made on The Texas Company's No. 2 McKinley, C NE SE Section 5-19-38,

indicates this water may be coming from the top of the lime zone above the pay horizon. This well was completed in the fall of 1930. Production had declined to about 55 bbls. of fluid per day, of which 25 per cent was water, when the experiments began. It was equipped with a packer on the 3-inch tubing. The packer was set 95 feet off bottom and 65 feet below the top of the white lime. The oil production showed an increase and reached a peak of 240 bbls. per day in three days. At the same time the water decreased from 25 per cent to 3 per cent.

One completion in the Hobbs Pool was reported in Humble Oil & Refining Co.'s No. 1-B Bowers, NW cor. Section 29-18-38, an inside well. On a company test it gauged 9,013 bbls. of oil and 8,500,000 feet of gas in 24 hours open, and 3,752 bbls. and 2,500,000 feet through the tubing. Official gauging for proration purposes gave it a potential of 11,880 bbls.

Three new locations were made, Continental Oil Co.'s No. 7 State, C SW NE Section 33-18-38, is a location, Stanolind Oil & Gas Co.'s No. 11 State, C NE SE Section 4-19-38, and Stanolind's No. 26 Thorpe, C SE NE Section 10-19-38, are digging cellar. All three are in the southeastern part of the field and in proven territory.

Stanolind Oil & Gas Co.'s No. 29 State, C SW NW Section 10-19-38, is drilling at 3,825 feet in lime and anhydrite and had a show of oil at 3,235 feet. Same company's No. 11-X Turner, NE cor. SW Section 34-18-38, is drilling at 2,990 feet in anhydrite. It topped the salt at 1,745 feet and bottomed that formation at 2,630 feet. Stanolind's No. 11 Byers, C NE NW Section 3-19-38, is drilling at 3,808 feet in lime.

Amerada Petroleum Corp.'s No. 2 Hardin, SE cor. SW Section 18-18-38, is drilling at 3,550 feet in anhydrite. It cut the salt at 1,674-2,560 feet and topped the brown lime at 2,835 feet. It had the first gas at 2,932-40 feet.

Gypsy Oil Co.'s No. 1 Hardin, SW cor. SE Section 18-18-38, is drilling at 3,985 feet in anhydrite, and Getty Oil Co.'s No. 5 McKinley, NE cor. Section 30-18-38, is bottomed at 3,205 feet and reaming at 3,000 feet. The last named topped the brown lime at 2,835 feet and had the first gas at 2,850 feet. Humble Oil & Refining Co.'s No. 2-B Bowers, SW NW SE Section 20-18-38, is moving in materials. Repollo Oil Co.'s No. 2 Grimes, SW SE NW Section 28-18-38, is bottomed at 2,875 feet and cemented the 10¾-inch at 2,710 feet with 700 sacks. Shell Petroleum Corp.'s No. 3-A McKinley, SE cor. Section 19-18-38, is moving in a machine. Its No. 3-B McKinley, SW cor. Section 20-18-38, reported a completion last week, is rated at 16,589 bbls. for proration purposes.

In the Lovington area, Western Drilling Co.'s No. 1 State, NE cor. SE Section 13-17-36, is drilling at 4,282 feet in anhydrite.

In the Lea area, The Texas Company's No. 1-B Lynch, C SW NW Section 34-20-34, cemented back to 592 feet, inside the 15½-inch, to straighten. Total depth is 1,160 feet. Same company's No. 2-A Lynch, C SE SE Section 34-20-34, spudded November 5 and cemented the 20-inch with seven sacks at 123 feet.

Eddy County

W. A. Scott's No. 1 Kaiser, NW SE Section 7-18-27, in the Compton district, is drilling at 1,738 feet in lime with no increase in oil or gas. It will go to 1,750 feet and then shoot the horizon at 1,608-25 feet. Finley, Woods and Brainard's No. 5 Brainard, C NW SW Section 5-18-27, is shut down at 1,255 feet. R. Spearow and others' No. 1 McClellan, SW NW NE Section 22-22-23, west of Carlsbad, is drilling at 667 feet in lime. Flynn, Welch & Yates' No. 64 State, SE NE NW Section 10-19-28, Artesia district, is shut down at 120 feet and part of the materials have been moved to their No. 65 State, NE SE SE Section 30-18-28.

Chaves County

R. D. Compton's No. 1 Emerson, SW cor. SE Section 20-10-24, near Roswell, is drilling at 1,794 feet in red beds and anhydrite, and the Warman Oil Trust's No. 1 Weldon & Hoar, NW cor. SE Section 9-14-25, Blackdom district, is shut down at 193 feet to run the 10-inch. Heaving sand is causing considerable trouble. Three joints of 12½-inch have been set.

De Baca County

Landowners Oil Co.'s No. 1 State, SW cor. NE Section 16-1s-27, Buffalo Creek, is shut down at 5,222 feet for casing and drilling line.

San Miguel County

Cabra Springs Oil & Gas Co.'s No. 1, C NE NE Section 22-12-22, Pino Mesa, is shut down at 410 feet for water. Supply is pumped about 3 miles.

WYOMING

Weston County

One completion was reported in the Osage Field in Tug Oil Co.'s No. 2, NE NW SW Section 15-46-64, which went to 3,110 feet without picking up anything additional and was abandoned at that depth. It had salt water in the Muddy sand at 2,875-89 feet. The well is west of the producers in the west extension of the pool. A near completion is reported in Duluth-Wyoming Oil Co.'s No. 2, CSL SE SW Section 12-46-64, which found the sand at 1,404-24 feet and is waiting for a shot. It will make a small pumper. Very little drilling has taken place around this location. It formerly was carried as Sandell and others. One new location was reported in Yellowstone Petroleum Co.'s No. 3 McCullough, SW NW NE Section 23-46-64, which set the 8¼-inch and is waiting.

Riggs Oil Co.'s No. 2, CEL SE NE Section 16-46-64, is drilling at 3,150 feet and is the deepest drilling well in the field. It is to the west of the Tug well, which showed salt water. Lincoln Syndicate's No. 1, SW cor. SE Section 10-46-64, is drilling at 1,100 feet, and Paymac Oil Corp.'s No. 1 Toyne, SE NW NE Section 3-46-64, is shut down at 1,490 feet. M.S.&W. Co.'s No. 13, SW SE NW Section 30-46-63, is drilling at 1,000 feet, and Chadron-Osage Oil Co.'s No. 18, NW SW SW Section 14-46-64, is running pipe on top of the sand.

Julius Peters and others' No. 1 Witzell, SE cor. NW Section 30-46-64, Fiddler Creek, is bottomed at 4,590 feet and cleaning out with 3,500 feet of oil in the hole. The oil is from sands at 4,494 and 4,515 feet. The well was shot with 100 quarts and cleaning out a bridge has been in progress several weeks.

Crook County

St. Onge Oil & Gas Co.'s No. 1, SW NE SE Section 20-53-61, Redwater district, is drilling at 600 feet. It was through the red beds at 450 feet.

Platte County

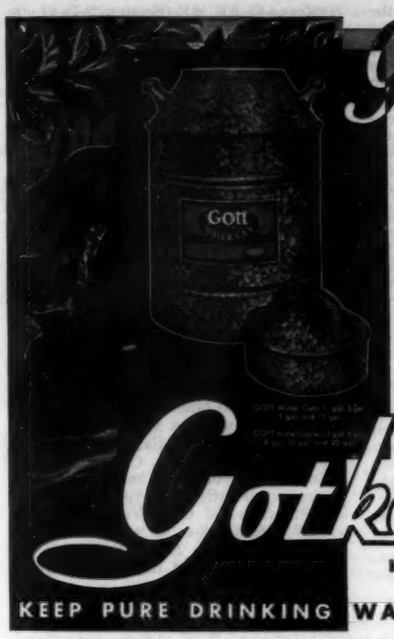
T. R. Oberman's No. 1 Diamond ranch, NW SE Section 30-21-68, west of Chugwater, is drilling at 150 feet in hard gray lime.

Converse County

Ohio Oil Co.'s No. 25 Kinney, SE SW SE Section 4-33-76, Big Muddy, which last week was reported flowing 10 bbls. per day through tubing from the Lakota sand at a total depth of 4,326 feet, is showing some improvement and is swabbing 75 bbls. per day. Its No. 26 Kinney, same location, which was put down to test a showing in a stray sand at 1,500 feet, was deepened to 2,200 feet without improving the prospects. It will be completed in the stray horizon and will make a small well. Continental Oil Co.'s No. 30 Glenrock Sheep, SW SE SE Section 4-33-76, is bottomed at 4,716 feet in gray sand and fishing for bailer. This is a test to the Sundance.

Natrona County

Peter Evanoff's No. 2, SW Section 3-39-79, in the west Salt Creek shale area, has temporarily suspended operations below 2,000 feet. Empire State Oil Co.'s well in the NE Section 12-33-83, Poison Spider, is drilling at 400 feet. Summitt Oil Co.'s No. 1 Trewitt, NW cor. Section 21-33-80, North Platte, is drilling in hard rock at 1,705 feet, which



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the drillers identify as a cap over the Muddy sand. Mutual Oil Syndicate's No. 2, C SW SE Section 14-35-79, Midway, ran tubing at a total depth of 6,075 feet and drove a wooden plug into the top while waiting for a short joint. The plug was blown out and the well began flowing. An analysis of the water indicates that it is not from the producing sand, but from behind the packer from the second Wall Creek. The well is estimated at 100 to 200 bbls. per day.

Carbon County

Ohio Oil Co.'s No. 1 Kanawha, Section 34-23-79, Allen's Lake structure, reported a location last week, is one of a series of core tests to be drilled to work out the structure. The company has taken an option on several thousand acres held by Kanawha Oil & Gas Co.

Mutual Oil Syndicate's No. 26-C, NW SE NE Section 1-18-78, Dutton Creek, which is being drilled to the Shannon sand for gas, is making hole at 1,310 feet. It is north of the oil wells in the Muddy and appears to be running 10 feet high. Ohio Oil Co.'s No. 1 Carbon, NW cor. Section 18-18-77, is drilling at 1,820 feet.

Lost Soldier Producing Co.'s No. 1, NE NE Section 25-26-88, Mahoney Dome, is drilling at 4,190 feet in the Nuggett with a show of oil and gas.

Fremont County

Yellowstone Oil Co.'s No. 1 Gabus, SW cor. Section 14-38-94, Shoshoni district, is shut down for the winter at 2,210 feet. It was pulling casing to ream when one of the drillers had his arm broken. Ward Oil & Gas Co.'s No. 2, NE cor. Section 28-34-90, Dutton Basin, is bottomed at 4,150 feet and fishing for bailer at 2,100 feet. The Texas Company's No. 2 State-Ridgway, SE SW SW Section 36-34-95, Alkali Butte, is shut down after cementing the 9-inch on top of the Muddy at 4,234 feet. Big Four Oil Co.'s No. 4 Enos, SE NW Section 27-3n-1w, Pilot Butte, was completed at 794 feet and made 18 bbls. the first 24 hours. Its No. 5, same tract, is spudding.

Sublet County

California Co.'s No. S-L, SW cor. SE Section 34-27-113, La Barge, is drilling at 903 feet.

Park County

Continental Oil Co.'s No. 1 Northern Pacific, SE SW NE Section 23-58-98, Frannie Dome, is moving in rotary. Contract has been let to the Rocky Mountain Drilling Co.

Hot Springs County

Empire State Oil Co. is drilling at 600 feet on the NE NW Section 14-44-98, Hamilton Dome.

Big Horn County

Crosby & Huntington's No. 1 Denio, Tract 43-C, Byron Dome, a test of a fault block, is preparing to resume at 600 feet.

MONTANA

Carbon County

An important extension of the Dry Creek Field on the southeastern side appears imminent in Carbon Oil & Gas Co.'s No. 1 McMinn, NW SW SW Section 7-7s-22, which topped the Dakota at 5,517 feet and cored 10 feet of the sand. The sand showed considerable saturation of both oil and gas and operations were suspended to set the 9⅝-inch. The well is half a mile south of the same company's No. 1 Armstrong, which came in for 1,800 bbls. per day, but which went a little too deep into the sand and developed bottom water. It was plugged back and is now a small producer.

Ohio Oil Co.'s No. 11 Bowman, C SE NE Section 4-7s-21, a mile northwest of the nearest producer, which plugged back to the Dakota at 5,665-79 feet, is still fighting water from the Lakota, but is flowing 300 bbls. per day, a part of which is water. Same company's No. 7 Robinson, C SE SE Section 3-7s-21, is flowing oil and water and is trying to shut off water from the Lakota. It will be produced from the Dakota. Ohio's No. 9 Souders, C SE SE Section 2-7s-21, is rigging up rotary.

Glacier County

Santa Rita Oil Co.'s No. 1 Yunck, NE NW NE Section 23-34-6w, in the Cut Bank area, gives evidence of being the best well so far completed. The sand was found at 2,853-60 feet and oil rose 1,000 feet in the hole. After the pipe was cemented and hole drilled a little deeper it is reported to have swabbed 248 bbls. in 24 hours. It is near the center of the oil development and about half a mile southwest of Tarrant's No. 1 Haglund, which made 85 bbls. per day initial.

Montana Power Co.'s No. 1 Simereo, C N half, Section 5-33-5w, which is located 4 miles southeast of the nearest producer, has been completed, but the company gives out no information concerning its operations. It is reported making close to 100 bbls. per day.

R. C. Tarrant's No. 1 Yunck, NW cor. Section 12-34-6w, a diagonal offset on the southeast to B.&H. Oil Co.'s No. 1 Haines, is swabbing 100 bbls. per day.

One new location was reported in Dakota-Montana Oil Co.'s No. 1 Drumheller, SW SE NE Section 3-34-6w, an east offset to Tarrant's No. 1 Yunck. Materials are being moved in. Routine operations include the following:

Santa Rita Oil Co.'s No. 2 Yunck, NE cor. SE Section 24-34-6w, is drilling at 2,625 feet, and B. E. Adams and others' No. 1 Britton, SE cor. NE Section 14-34-6w, is drilling at 2,100 feet. Hannah-Porter Co.'s No. 1 Britton, SW cor. Section 14-34-6w, is drilling at 260 feet, and Atlantic-Pacific Oil Co.'s No. 1 Matson, NE SE NW Section 14-34-6w, is spudding.

R. C. Tarrant's No. 1 Hope, C SW SW Section 18-34-5w, is building rig, and his No. 1 Longmiller, NE cor. Section 24-34-6w, is drilling at 385 feet. Tarrant's No. 1 McLellan, C SE Section 7-34-5w, is drilling at 660 feet, and his No. 1 Haglund, Sr., NW SW NW Section 13-34-6w, is drilling at 2,150 feet.

The Texas Company's No. 1 Fisher, C S half SW Section 10-35-5w, in the gas district, is shut down at 2,546 feet repairing derrick, which was damaged by fire when gas became ignited.

UTAH

Utah Southern Oil Co.'s No. 1 Balsey, C NE NE Section 31-23-21, Grand County, is shut down for orders at 6,120 feet in black shale and salt. The operation will require some revision of equipment to proceed deeper without undue risk.

WASHINGTON

Ohio Oil Co.'s No. 1-A Robinson, Section 5-17n-9w, Gray's Harbor County, is drilling at 6,335 feet in basalt. It has been in that formation for nearly 400 feet. Mordello L. Vincent and others' No. 1 Rosalie, Section 9-28n-13, Forks district, Clallam County, is drilling at around 1,000 feet. An officer of Olympic Petroleum Co. says the company's No. 1 Sims, Section 12-26n-14w, in the Hoh River district, Jefferson County, is showing some crude through a hole full of mud with casing on bottom at a total depth of 2,069 feet. This well was drilled to this depth by Leslie Petroleum Co. which cut several sand horizons in the upper formation which showed for about 50 bbls. per day. Ives Oil & Gas Co.'s No. 2, Section 21-40-4, Noosack district, Whatcom County, is reported resuming at 930 feet. It has made no new hole for several months. M.&M. Oil & Gas Co.'s No. 2 Land, Section 28-39-2, Ferndale district, Whatcom County, which has been standing at 1,800 feet for some time, is preparing to plug back and save the gas encountered in the shale. C. S. Shipney is in charge. Simcoe Oil Co.'s No. 1, NW NW Section 24-11-17, Simcoe Indian Reservation, is drilling at 2,740 feet, 10 feet off old bottom, after plugging back to straighten.

OREGON

Valley Gas Co.'s No. 1 Alexander, Section 14-7-5, Polk County, is reported preparing to plug. Another hole will be drilled higher on structure.

Three Completions in Michigan District; Two Small Producers, One Dry Hole

By GEORGE A. WHITNEY

MOUNT PLEASANT, Mich., Nov. 21. Completions are slow in the Central Michigan Field, there being only three reported for the week, all in Midland County. In Lee Township, W. Hunter Atha's No. 1-A well, 958 feet from the south line and 330 feet from the west line of the State of Michigan land, NW SW NW Section 18, is credited with an initial of 40 bbls. from the Dundee formation. Edward Stewart and others' No. 2 well, on the Opperman farm, SE NE SE Section 12, Greendale Township, is reported at 15 bbls. initial from the same formation. Theodore Oil Co.'s No. 1 well, 330 feet from the south and east lines of the McBain farm, SE SE SW Section 1, Greendale Township, struck salt water in the Dundee and is dry.

In Isabella County, Chippewa Township, C. Fred White and others are drilling a test 330 feet from the south and east lines of the W. A. Dennis and others farm, SE NW Section 3. T. K. Buzzard made a location for No. 2 on the Mahon farm, Section 24, Vernon Township. Wittmer Oil & Gas Properties made a location for No. 2 on the Cashen farm, Section 30, same township. Michigan Oil & Gas Co. made a location in the northeast corner of the Frank H. Lynch farm, NE NE NW Section 35, same township.

In Midland County, the Pure Oil Co. is drilling No. 2-A well, 1,650 feet from the north line and 990 feet from the east line of the Claud E. Harnick farm, NE Section 6, Greendale Township. Same company is drilling No. 3 well, 990 feet from the south line and 330 feet from the west line of the A. Seeley farm, SW SE Section 9, same township. also drilling No. 1 well, 2,310 feet from the north and east lines of the Corwin A. Fergus farm, NE Section 21, and W half NW Section 22, Greendale Township. Walter L. McClanahan, Inc., is drilling No. 2 in the northeast corner of the W. S. Root farm, NE NE SW Section 12, same township. Columbia Oil & Gas Co. is drilling No. 1 in the northeast corner of the Gilson-Fales farm, NE NE SE Section 16, same township. Same company is drilling No. 4 in the southwest corner of the M. F. McLaughlin farm, SW SW NW Section 15, same township. Isaac Shuler, trustee, is drilling No. 2 well, 333 feet from the north line and 1,653 feet from the east line of the E. Rhemenschnider farm, NE NW NE Section 14, same township. W. A. Robinson is drilling No. 3 well, 990 feet from the south line and 330 feet from the east line of the N. J. Skinner farm, NE SE SW Section 9, same township. R. D. Malcolm is drilling a second test on the Hastings farm, NE SE SE Section 13, and G-Lee-P Oil Development Co. is drilling No. 2 on the William Schaffer farm, SE SW SW Section 12, same township.

Michigan Pacific Oil & Gas Co. is drilling No. 2 well, 990 feet from the north line and 330 feet from the east line of the J. H. Otway, Jr., farm, NE SW Section 22, Porter Township, Midland County. Same company is reported fishing at 3,540 feet on the B. Rayner farm in SW SW SW Section 6, Lee Township, same county.

Reed Oil Co. is drilling on the E. L. Mitchell farm, SE SE Section 36, Hart Township, Oceana County.

In Muskegon County, Muskegon Oil Corp. is drilling a test 330 feet from the north line and 990 feet from the east line of the L. Price farm, NE SW Section 12, Dalton Township. H. and W. Feicke are drilling a second test 670 feet from the south line and 860 feet from the west line of the H. and W. Feicke farm, SE SW SE Section 1, Fruitland Township, same county.

Leasers are active taking up land for development work in the vicinity of Napoleon, in Jackson County, where a dome includes the southwest part of Washtenaw County, the west and north portions of Lenawee County, and the east half of Hillsdale County, Monroe County, in Michigan and Steuben County in Indiana. In this area there is a record of eight wells financed by local people, none drilled over 2,100 feet. Several years ago a test was drilled to 2,100 feet on the Silvers property, at the edge of the town of Napoleon, where some gas was found in what at that time was supposed to be the Berea formation. According to advice, the Dundee formation should be found around 2,250 feet and the Trenton lime formation at around 3,300 feet. Ladd and others of Detroit who own the old gas well at Napoleon will drill a new well about half a mile south of the old gas well, either on the Stephenson or the Morris Smith farm, then will clean out the old well and drill it deeper.

The C. F. White interests have purchased from Walter L. McClanahan, Inc., the lease on the Speerbecker lease in Section 13, Greendale Township, Midland County, which has one producing well on it.

Theodore Oil Co. is drilling around 3,540 feet on the Thompson Brothers farm, near Farwell, SE SW NE Section 35, Greenwood Township, Clare County.

Southwest Texas Fields

(Continued from Page 58)

been abandoned with a hopeless fishing job. It is in Survey No. 63.

In McMullen County, F. B. Lefevre's No. 1 Jacob has been abandoned at 1,205 feet. It is 1¼ miles south and a little west of the discovery well of the Jacobs Pool, and got the sand high but full of salt water.

Duval County

C. G. Porter crowded the upper sand in the North Government Wells Pool, a little farther to the southeast last week by bringing in about a 100-bbl. well, No. 1 J. T. Smith, 200 feet from the north and west lines of the NW of NE of Survey No. 46, and about 200 feet northwest of Buchanan & Tyrrell's No. 1 Smith which made water in the lower sand. Porter's No. 1 Smith is a pumper, at the south end of the field.

At the north end of the field, Magnolia completed its No. 2 Bryan White for an 85-bbl. pumper on the east edge of the field.

Sun Oil Co. is still working on its No. 1 Duval County Ranch lands, in Survey No. 78, which had a pretty good looking core at 2,137 feet and is last reported drilling at 2,350 feet. It is 3 miles north of production and in the line of the chain of pools.

There was disappointment south of the Sarnosa Pool. La Jita Oil Co.'s No. 3 Weil, in Survey 566, at 2,641 feet, and 200 feet below sand depth, failed to get any sand and was abandoned.

Frio County Test

Amerada Petroleum Corp.'s No. 1 Halff & Oppenheimer, which has been tied up with a bad fishing job, has succeeded in clearing the hole. Total depth was 4,785 feet. It is on a big block on which a lot of money was spent and crooked hole tests taken at intervals disclosed that the bottom was out of plumb. It was cemented back and when they started drilling again drill stem parted, and it looked bad for a time.

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Gulf Coast Fields and Wildcats

(Continued from Page 54)

Texas Gulf Prod. Co.'s No. 12-H Kirby, Henry Griffith League, 429 ft. W of No. 8-H and 65 ft. N of S line ..... Rig.

Texas Gulf Prod. Co.'s No. 2 T. H. McLean, Henry Griffith League, 711 ft. from E line midway between C. Barber and McLean tracts on separating line ..... Drlg. shale 5,220 ft.

Texas Gulf Prod. Co.'s No. 3 Tarbutton, Henry Griffith League, 746 ft. from E line in C of tract ..... Rock 1,202 ft.; losing returns.

Texas Gulf Prod. Co.'s No. 2 O. K. Winfrey, W. D. Smith Sur., 295 ft. N of SW cor. of A. E. Barber lease and 100 ft. W of E line of Winfrey lease ..... Drlg. rock 5,392 ft.

Yount Lee Oil Co.'s No. 4-A Zadie Fisher, Wm. Bloodgood Sur., 301 ft. from W line and 96 ft. from S line of tract ..... Hard sand 6,643 ft; D.P. stuck.

LOST LAKE—CHAMBERS COUNTY

Pure Oil Co.'s No. 16 Mayes, E. H. R. Wallis Sur., 1,426 ft. N and 1,429 ft. E of No. 1 Lost River ..... Drlg. hard lime and shell 4,100 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 24 Moore, Mark Smith Sur. ..... Tested S.W. 3,815 ft.; drlg. hard shale 3,962 ft.

RABBS RIDGE—FORT BEND COUNTY

Gulf Prod. Co.'s No. 1 Edwards & Riggins, Samuel Kennedy Sur., 466.5 ft. E and 466.5 ft. N of SW cor. of SE 20-acre unit ..... Sandy shale showing oil 5,107 ft.; cmtd. 7-in. csg.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 5 Meyers, J. Rabb Sur., 1,000 ft. W and 350 ft. N of SE cor. of Meyers 188-acre tract ..... Spudded.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 4 T. R. Booth, Samuel Kennedy Sur. (location to come) ..... Comp. flowing 50 bbls. per hour, ½-in. choke.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 7-A F. I. Booth, Samuel Kennedy Sur. ..... Drlg. hard sand rock 4,443 ft.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 8-A F. I. Booth, Samuel Kennedy Sur. ..... Derrick.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 3 Davis, Robt. Peebles Sur., 2,985 ft. from W line and 350 ft. from N line ..... Shale 6,829 ft.; standing.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 8-A George, J. Rabb Sur., 1,000 ft. from W line and 350 ft. from S line of tract ..... Derrick.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 4-A George, J. Rabb Sur. ..... Location.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 6 Lockwood, 4,000 ft. E and 328 ft. N of SW cor. ..... Drlg. hard shale and lime 4,147 ft.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 7 Lockwood, J. Rabb Sur. ..... Location.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 9-A Lockwood & Sharp, J. Rabb Sur., due S offset Gulf and Humble's No. 4 Meyers ..... Comp. flowing 50 bbls. per hour 5,282 ft.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 11-A Lockwood & Sharp, J. Rabb Sur. ..... Location.

Humble O. & R. Co. and Gulf Prod. Co.'s No. 7-B Lockwood & Sharp, J. Rabb Sur. ..... Drlg. shale and lime 2,702 ft.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 8-B Lockwood & Sharp, J. Rabb Sur., 1,000 ft. from N line and 500 ft. from E line of 938-acre "B" lease ..... Drlg. hard sand and lime 2,108 ft.

Humble Oil & Ref. Co. and Gulf Prod. Co.'s No. 1 R. A. and O. H. Wolters, Robt. Peebles Sur., 325 ft. S and 500 ft. W of NE cor. of 1,000-ac. tract ..... Derrick.

Humble Oil & Ref. Co.'s No. 1 Gubbels, Samuel Kennedy Sur., 750 ft. N and 775 ft. W of SE cor. of Mrs. Mary Gubbels 90.6 acres ..... Drlg. sticky shale 4,147 ft.

Naylor et al's No. 1 Whitmore, Samuel Kenedy Sur., 467 ft. N of S line in C E and W of Lot 7 (20 acres) ..... Drlg. sand and lime 3,155 ft.

The Texas Company's No. 3 Wolters, Samuel Kennedy Sur., 750 ft. N of No. 2 and 300 ft. W of E line ..... Drlg. shale 4,664 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 2 Broussard & Orme, Martin Duman Sur., 300 ft. SE of No. 1 ..... Sticky shale 6,361 ft.; s'detracking 5,254 ft.

Yount Lee Oil Co.'s No. 30 Cade (W.O.), N. Fitzsimmons Sur. ..... Pulled screen to W.O. 5,149 ft.

Yount Lee Oil Co.'s No. 32 Cade, N. Fitzsimmons Sur., 400 ft. due S of No. 30 ..... Drlg. shale and lime 5,100 ft.

Yount Lee Oil Co.'s No. 1 Mathais fee, 150 ft. from S line and 192 ft. from E line of 23.44-acre tract in Sarah Reeves Subd., Martin Dunman Sur. ..... Cap rock 2,597-2,632 ft.

Yount Lee Oil Co.'s No. 13 Smith, Martin Dunman Sur., 660 ft. W of No. 12 in line with Nos. 11 and 12 ..... Drlg. hard sand and lime 3,610 ft.

MANVEL—BRAZORIA COUNTY

The Texas Company's No. 2 Ewing, 1,320 ft. southwesterly and 200 ft. northwesterly at right angles out of E cor. of Blk. E of Suburban Gardens Subd., Harvey N. Little Sur. ..... Reset screen 4,022 ft.; swabbing.

ARIOLA—HARDIN COUNTY

Gulf Prod. Co.'s No. 1 Kirby, Ariola, 330 ft. out of SE cor. of 100-ac. tract, Ariola Sur. ..... Drlg. hard sand rock 5,943 ft.

Houston Oil Co.'s No. 1-Y Ariola fee, 5,610 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Drlg. gumbo and lime 3,897 ft.

Houston Oil Co.'s No. 1-Z Ariola fee, 3,000 ft. from W line and 5,610 ft. from N line of Ariola Sur. ..... Drlg. sand and shale 4,526 ft.

Republic Prod. Co.'s No. 2 Ariola fee, Ariola Sur., 660 ft. due E of Gulf's No. 1-A Kirby ..... Fishing drill pipe 5,980 ft.

Republic Prod. Co.'s No. 3 Ariola fee, Ariola Sur., 660 ft. due S of Gulf's No. 1-A Kirby ..... Derrick.

BATSON—HARDIN COUNTY

W. C. Christian's No. 1 Buchanan, Josephine Milholme Sur., 800 ft. from W line and 110 ft. from S line of 4.15-acre tract ..... Cap rock 2,589-2,609 ft.; abnd.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 90-A Jordit ..... Drlg. sticky shale 702 ft.

Rio Bravo Oil Co.'s No. 403-B "B" ..... Set 14 ft. of 7-in. screen 192 ft.; comp. pumping 1 bbl. net oil.

SOUR LAKE—HARDIN COUNTY

Houston Prod. Co.'s No. 1 Merchant, Stephen Jackson Sur., 1,226 ft. from S line and 90 ft. from E line of lease ..... Cap rock 4,051 ft.; preparing to deepen.

M. M. Miller's No. 1 Liberle Oil Co., Stephen Jackson Sur., 1,380 ft. NW of Houston Prod. Co.'s No. 1 Merchant ..... Derrick.

HUMBLE—HARRIS COUNTY

J. D. Clay's No. 5 Bender, R. Dunman Sur., 525 ft. from S line and 203 ft. from E line of 100-acre tract ..... Rig.

Sun Oil Co.'s No. 28 Bender, W. B. Adams Sur., 350 ft. W of No. 27 ..... Temp. abnd. 4,673 ft.

Sun Oil Co.'s No. 59 River, R. Dunman Sur., 74 ft. from E line and 1,441 ft. from S line of block .. Standing 370 ft.

Sun Oil Co.'s No. 65 River, R. Dunman Sur., 2,122 ft. from S line and 371.6 ft. from E line of lease ..... Sand and shale 1,105 ft.

E. M. Wilson's No. 1 Wheeler & Pickens, Block 20, 40 ft. N of S line and 75 ft. E of W line of Blk. 20, J. B. Stevenson Sur. ..... Rigging up to pump 1,451 ft.

MYKAWA—HARRIS COUNTY

Crown-Framer Oil Co.'s No. 3 Minnetex, 100 ft. from N line and 100 ft. from E line of W half of Block 251, Wm. Lovett Sur. ..... Sandy shale showing oil 4,845 ft; cmtd. csg. 4,800 ft.; drld. plug.

Leon Wilkerson's No. 1 Irwin, Wm. Lovett Sur., 300 ft. N of Humble's No. 1 Irwin ..... Derrick.

PIERCE JUNCTION—HARRIS COUNTY

Rio Bravo Oil Co.'s No. 25-A Settegast, 625 ft. W and 525 ft. N of SE cor. "A" lease, Jas. Kopman Sur. No. 44 ..... Drlg. shale 4,420 ft.

Rio Bravo Oil Co.'s No. 26-A Settegast, J. Kopman Sur., 1,310 ft. from N line and 750 ft. from E line of "A" lease ..... Drlg. gumbo and lime 3,084 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 6 Burrell, Wm. Smith Sur., 1,610 ft. N and 300 ft. E of SW cor. of 232-acre tract .... Drill stem test 4,350 ft.; showed S.W.

Lowrie & Young's No. 1 Junker, Wm. Smith Sur., 125 ft. N and 100 ft. E of Gulf Prod. Co.'s No. 1 Junker in 260-acre tract ..... Losing returns 1,876 ft.

ESPERSON—LIBERTY COUNTY

Cranfill-Reynolds Co.'s No. 7 Davis (D.D.), David L. Kokernut Sur. ..... Temp. abnd. 6,302 ft.

Cranfill & Reynolds' No. 5 Esperson (W.O.), M. Duncan Sur., 100 ft. N line and 300 ft. E line ..... D.S. stuck 6,844 ft.

Cranfill-Reynolds Co.'s No. 9 Moore's Bluff, M. Duncan Sur., 600 ft. S of N line of Moore's Bluff tract in line with No. 6 Davis and No. 6 Moore's Bluff ..... Location.

Cranfill-Reynolds Co.'s No. 10 Moore's Bluff, M. Duncan Sur., 1,500 ft. from E line and 2,100 ft. from N line of 632-ac. tract ..... Drlg. shale 4,956 ft.

HULL—LIBERTY COUNTY

Carpenter & Parr's No. 2 Antilley, Jesse DeVore Sur., 521 ft. W and 250 ft. S of NE cor. of 20-acre lease.. Derrick.

D. & L. Prod. Co.'s No. 1 Pevito (W.O.), Jesse DeVore Sur., 34½ ft. from E line and 30 ft. from N line of 5-acre strip ..... Comp. pumping 145 bbls. 4,687 ft.

Empire G. & F. Co.'s No. 34 Barngrover, Jesse DeVore Sur., 75 ft. out of SW cor. of lease ..... Sand 4,764 ft.; D.S. stuck.

W. B. Flynn's No. 1 Ray (W.O.), Jesse DeVore Sur. .... No report.

Gulf Coast Dev. Co.'s No. 2 Finley, Jesse Devore Sur., 135 ft. W of No. 1 and 51 ft. S of N line of lease .... No report.

Gulf Prod. Co.'s No. 80 Phoenix (W.O.), Jesse DeVore Sur. ..... Set screen 3,498 ft.; spraying oil, 300 lbs. on tubing.

Hannah Oil Co.'s No. 1 Hannah, Jesse DeVore Sur., 100 ft. W of The Texas Co.'s No. 1 Hannah ..... Sand and shale 3,186 ft.; cmtd. csg. 3,180 ft.

Lynd & Rowe's No. 1 Noble & Lynd, Jesse DeVore Sur., 137 ft. out of SE cor. 5-acre tract ..... No report.

Porter & Baggett's No. 1 Baggett, Jesse Devore Sur., 80 ft. from W line and 50 ft. from S line of 171-acre tract ..... Drlg. 1,000 ft.

Republic Prod. Co.'s No. 147 Dolbear, Jesse DeVore Sur., 256 ft. W of No. 131 ..... Drlg. 1,600 ft.

Unique (Eclipse) Oil Co.'s No. 1 Knox-Nelson-Layton, Jesse Devore Sur., 30 ft. from N line and midway E and W of ½-acre tract ..... Derrick.

NORTH DAYTON—LIBERTY COUNTY

Ferguson & Head's No. 1 Quintette, H.&T.C. Sur., 48 ft. E of W line and 674 ft. N of S line of 10-acre tract ..... Comp. pumping 8 bbls. fluid, 20 per cent water, 1,245 ft.

SOUTH LIBERTY—LIBERTY COUNTY

Mecom Oil Co.'s No. 1 Barrett, M. G. White Sur., 365 ft. from S line and 155 ft. from E line of lease ..... Sand showing oil 3,630-41 ft.; cmtd. 8-in. csg. 3,600 ft.

MARKHAM—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 McDonald, I.&G.N. Sur., Blk. 9, Sec. 5, 460 ft. S and 80 ft. E of NW cor. of 35-acre tract ..... T.D. 3,698 ft.; sidetracked at 3,710 ft. and drilled to sand 3,507-12 ft.

CONROE—MONTGOMERY COUNTY

Alpha Pet. Co.'s No. 1 Keystone Mills, Lemuel Smith Sur., 466 ft. from E line and 1,398 ft. from N line .. Spudded.

Gulf Coast Drlg. & Dev. Co.'s No. 1 South Texas Dev. Co., T.&N.O. Sur., 4,500 ft. E of No. 1 Keystone Mills.. Drlg. gumbo 1,302 ft.

W. B. Hamilton's No. 2 Moorehead, L A Lang Sur., 466 ft. from N line in C E and W of 40-acre tract ..... Drlg. sticky shale 3,012 ft.

Harrison & Abercrombie's No. 1 O. L. Alexander, John McHorse Sur., 530 ft. from W line and 350 ft. from N line of 100-acre tract ..... Drlg. shale 805 ft.

Harrison & Abercrombie's No. 2 Alexander, John McHorse Sur., 964 ft. E of No. 1 or 1,535 ft. from W line and 391 ft. from N line of tract ..... Rig.

Hooper-Rutherford Oil Co.'s No. 2 Hooper, I.&G.N. Sur., Abst. 649, 708 ft. S of No. 1 in center of tract E and W ..... Comp. flowing 67 bbls. per hour, 1,000 lbs. on tubing, ¼-in. choke.

Hooper-Rutherford Oil Co.'s No. 3 Hooper, I.&G.N. Sur., Abst. 649, 782 ft. S of No. 2 in center of tract E and W ..... Spudded.

Humble O. & R. Co.'s No. 3 Dobbins, Ransom House, 700 ft. S from NW cor. lease and 460 ft. easterly at right angles ..... Derrick.

Humble Oil & Ref. Co.'s No. 4 Dobbins, Ransom House Sur., 1,064 ft. E of No. 2 and 466 ft. N of S line ..... Derrick.

Humble Oil & Ref. Co.'s No. 1 Hirsch, D. McIntyre Sur., 450 ft. E of W line in C N and S of 40-acre tract ... Drlg. shale and lime 3,592 ft.

Humble Oil & Ref. Co.'s No. 3 Madeley, Ransom House Sur., 466 ft. southwesterly along southernmost SE line from SE cor. of tract and 466 ft. northwesterly at right angles ..... Drlg. hard lime and shale 4,504 ft.

Humble Oil & Ref. Co.'s No. 3 Madeley, 650 ft. E and 650 ft. S of SW cor. of M. W. Real Sur., in Ransom House Sur. ..... Drlg. hard lime 3,996 ft.

Humble Oil & Ref. Co.'s No. 4 Madeley, Ransom House Sur., 1,000 ft. N of No. 2 and 1,000 ft. W of No. 1.... Drlg. shale 301 ft.

Humble O. & R. Co.'s No. 1 J. W. McDonald, John Davis Sur., 150 ft. S of N line of 56.55-acre tract, and direct offset James Papadakis' No. 1 McDonald.. Drlg. sand rock 3,147 ft.

Humble Oil & Ref. Co.'s No. 2 McDonald, John Davis Sur., direct offset No. 1-B Cartwright ..... Derrick.

Humble Oil & Ref. Co.'s No. 19 South Texas Dev. Co., 30 ft. N and 682 ft. W of SE cor. of T. C. Howell Sur.. Drlg. shale 5,144 ft.

Humble Oil & Ref Co.'s No. 20 South Texas Dev. Co., 765 ft. S and 671 ft. W of NE cor. of Theo. Slade Sur. ..... Sand showing oil 5,150 ft.

Humble Oil & Ref. Co.'s No. 21 South Texas Dev. Co., T. C. Howell Sur., 933 ft. NE of No. 8 and 709.8 ft. NW of survey line ..... Drlg. shale 5,164 ft.

Humble Oil & Ref. Co.'s No. 22 South Texas Dev. Co., Theo Slade Sur., 333 ft. SW of SE cor. of Alex McCown Sur., thence 500 ft. S at right angles ..... Drlg. shale and lime 5,005 ft.

Humble Oil & Ref. Co.'s No. 23 South Texas Dev. Co., Theo. Slade Sur., 660 ft. N of No. 9 and 350 ft. E of E line of Gulf Coast Drlg. & Dev. Co.'s 60-acre tract.. Drlg. sand 5,120 ft.

Humble Oil & Ref. Co.'s No. 24 South Texas Dev. Co., Theo. Slade Sur., 1,520 ft. W and 765 ft. S of NE cor. of survey ..... Derrick.

Humble O. & R. Co.'s No. 25 South Texas Dev. Co., Theo. Slade Sur., 849 ft. S of No. 21 ..... Derrick.

Humble Oil & Ref. Co.'s No. 26 South Texas Dev. Co., 1,200 ft. S of SE cor. of Gulf Coast D. & D. Co.'s "B" lease ..... Drlg. shale and lime 4,351 ft.

Humble Oil & Ref. Co.'s No. 27 South Texas Dev. Co., T.C. Howell Sur., 950 ft. NE of No. 22 and 950 ft. W of No. 14 ..... Derrick.

Humble Oil & Ref. Co.'s No. 1-A Alexander, NE cor. of J. McHorse Sur. ..... Set screen and liner 5,152 ft.

Rumble Oil & Ref. Co.'s No. 2-A Alexander, J. McHorse Sur., 350 ft. from the E line in the C N and S of 30-acre tract ..... Derrick.

Humble Oil & Ref. Co.'s No. 1-B Alexander, John McHorse Sur., 599 ft. S and 363 ft. E of NW cor. of Alexander "B" lease ..... Drlg. shale, lime and shells 3,144 ft.

Humble Oil & Ref. Co.'s No. 1-C Alexander, John McHorse Sur., 577 ft. from E line of survey in C N and S of 20-acre tract ..... Drlg. shale and lime 1,568 ft.
Humble O. & R. Co.'s No. 1-D Alexander, John McHorse Sur., 599 ft. S of N line of survey and midway E and W lines of 20-acre "D" lease ..... Derrick.
Humble O. & R. Co.'s No. 1-E Alexander, John McHorse Sur., 577 ft. E of W line of Sur., and midway N and S line of 20-acre "E" lease ..... Shale 982 ft.; cmtd. 10¾-in. csg.
Humble Oil & Ref. Co.'s No. 7-A Cartwright, 350 ft. N of S line, due N offset Violet & Griffith's No. 1 Hooper ..... Oil sand 5,104 ft.; cmtd. 7-in. csg.
Humble Oil & Ref. Co.'s No. 1-B Cartwright, John Davis Sur., C of 20-acre "B" lease ..... Rig.
Moore & Bruton's No. 2 Hooper, L&G.N. Sur., Abst. 650, 466 ft. N of S line in C of tract E and W ..... Drlg. shale 3,681 ft.
Navarro Oil Co.'s No. 1 Rhoden, Wilson Strickland Sur., 470 ft. from S line and 430 ft. from E line of 16-acre tract ..... Set 84 ft. of 5-in. screen 5,100 ft.; comp. flowing 225 bbls. in 12 hrs.; 1,550 lbs. on tubing; ¼-in. choke.
James Papadakis' No. 1 Stella McDonald, John Davis Sur., 241¼ ft. from E line, 202.8 ft. from S line of 5-acre tract ..... Set 50 ft. of 5-in. screen 5,118 ft.; washing.
South Gulf Oil Co.'s No. 1 Granger, T.&N.O. Sur. No. 14, 467 ft. out of most westerly NW cor. of 117-acre tract ..... Drlg. shale 920 ft.
Southland Oil Co.'s No. 1 Cummings, Wilson Strickland Sur., 466 ft. out of NE cor. of 104-acre tract ..... Comp. flowing 13 bbls. per hour; 1,700 lbs. on tubing; 3/16-in. choke.
Southland Oil Co.'s No. 2 Cummings, Wilson Strickland Sur., 466 ft. from E line of survey, 934 ft. SE of No. 1 ..... Derrick.
Standard Oil Co. of Kansas' No. 1 Alexander, John McHorse Sur., 330 ft. from N line and 363 ft. from W line of tract ..... Sand showing oil 5,090-5,110 ft.; cmtd. 7-in. csg.
C. C. Steinberger's No. 1 South Texas Dev. Co., T.&N.O. Sur., Abst. 568, 640 ft. from S line in S E and W of 35-acre tract ..... Drlg. shale 370 ft.
C. C. Steinberger's No. 2 South Texas Dev. Co., T.&N. O. Sur., Abst. 568, 1,100 ft. from S line in center E and W of 35-acre tract ..... Derrick.
G. W. Strake's No. 1 Lewis, Chas. Stewart Sur., 1,400 ft. E of W line and 2,200 ft. N of S line ..... Drlg. gummy shale 3,630 ft.
The Texas Co.'s No. 2 Moody, Ransom House Sur., 466 ft. S 15 degrees E and 466 ft. N 75 degrees E from NW cor. lease ..... Spudded.
The Texas Co.'s No. 3 Moody, Ransom House Sur., S 15 degrees E 1,398 ft. and N 75 degrees 466 ft. from NW cor. of lease ..... Cmtd. 10¾-in. csg. 910 ft.
The Texas Company's No. 4 Moody, Ransom House Sur., 1,064 ft. E of No. 1 and 466 ft. S of N line ..... Derrick.
The Texas Co.'s No. 1 W. S. Rhodes, Rhodes Sur., 466 ft. from W line and 220 ft. from S line of lease.... Derrick.
Tidal Oil Co.'s No. 2 Lewis Estate, C. B. Stewart Sur., 467 ft. from N and W lines of Lewis 665.5-acre tract.. Spudded.
Violet & Griffith's No. 1 Mrs. Fannie Hooper, M. DeMoss Sur., 350 ft. S of N line of survey in C E and W .... Drlg. sand and shale 5,040 ft.
Violet & Griffith's No. 6 Mrs. Fannie Hooper, M. DeMoss Sur., C of survey E and W, due offset Alpha's No. 1 Dunn ..... Drlg. shale 3,912 ft.

PORT NECHES—ORANGE COUNTY

The Texas Co.'s No. 2 Polk-Kuhn-Glass (D.D.), 350 ft. E and 100 ft. S of SW corner of Marshall Beauchamp Sur. ..... Set 35 ft. of 7-in. screen 3,508 ft.; comp. flowing 300 bbls. daily.

REFUGIO—REFUGIO COUNTY

Hewitt & Dougherty's No. 1 M. F. Lambert, Wm. Hews and L. Brown Sur., 4,350 ft. NE along NW line from SW cor. of United Prod. Corp.'s M. F. Lambert lease and thence 990 ft. SE at right angles ..... T.D. 6,518 ft.; plugged to sand 6,464-81 ft.; comp. flowing 600 bbls., ¼-in. choke.

CLAY CREEK—WASHINGTON COUNTY

Clay Creek Oil Co.'s No. 2 Bimage, J. F. Perry Sur., 1,600 ft. from S line and 150 ft. from E line of sur... Coring shale showing oil 922 ft.
Sun Oil Co.'s No. 1 Schulte, J. F. Perry Sur., 204 ft. from NE line and 300 ft. from SE line of tract ..... Drlg. 905 ft.

SOUTH LOUISIANA FIELDS

JENNINGS—ACADIA PARISH

Olympic Oil Co.'s No. 1 Luckett, 1,150 ft. S and 75 ft. W of NE cor. of Sec. 42-9s-2w ..... Drlg. gumbo 1,422 ft.
Phillips & Artigue's No. 2 Cruse (W.O.), 35 ft. from E line and 60 ft. from N line of tract in Sec. 47-9s-2w.. Drlg. sand 1,861 ft.
Yount Lee Oil Co.'s No. 11 Housierre-Latriellle, 1,010 ft. N and 5,050 ft. S of SW cor. of Sec. 47-9s-2w ..... Drlg. shale 6,626 ft.

DARROW—ASCENSION PARISH

Rio Bravo Oil Co.'s No. 2 Community, Sec. 21-10s-2e, 1,760 ft. S and 660 ft. W of No. 1 ..... Location.
Rio Bravo Oil Co.'s No. 1 Gumbel, 4,000 ft. W and 350 ft. S of NE cor. of S. Gumbel & Co. tract, Sec. 33-10s-2e ..... Derrick.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 22 United Land Co., 5,760 ft. N and 1,360 ft. W of SE cor., Sec. 15-10s-4e..... No report.

IOWA—CALCASIEU AND JEFF DAVIS PARISHES

Shell Pet. Corp.'s No. 2 Fontenot, 225 ft. E and 225 ft. N of SW cor. of Sec. 7-9s-6w ..... Sand showing oil 6,921-38 ft.; setting screen.
Shell Pet. Corp.'s No. 3 Fontenot, Sec. 7-9s-6w, direct E offset Magnolia's No. 2 Waite ..... Derrick.

EDGERLY—CALCASIEU PARISH

The Texas Company's No. 1 Miller Estate, 150 ft. E and 150 ft. S of NW cor. of NE of Sec. 27-9s-11w ..... Fishing bit 6,084 ft.

LOCKPORT—CALCASIEU PARISH

Lockport Oil Co.'s No. 1 Phoenix ..... D.S. stuck 1,200 ft.; standing.
Magnolia Pet. Co.'s No. 6-A Farquahar, 1,020 ft. E and 150 ft. N of C of Sec. 8-10s-9w ..... Drlg. gumbo 1,840 ft.
Union Sulphur Co.'s No. 4 Martha Moss, Sec. 8-10s-9w.... Drlg. gumbo 2,010 ft.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 770 fee, 392 ft. S, 1,342 ft. W of center, Sec. 29-9s-10w ..... Pulling screen to deepen 4,679 ft.
Union Sulphur Co.'s No. 774 fee, 226 ft. W, 114 ft. S of center of Sec. 28-9s-10w..... Sand 3,388 ft.

VINTON—CALCASIEU PARISH

Marrs McLean's No. 14 Gray, Sec. 33-10s-12w, 88 ft. W and 30 ft. S of No. 4 ..... Heaving shale 3,054 ft; cut 6-in. liner 1,758 ft; set 38 ft. of 6-in. screen 1,811 ft.; failed to flow; standing.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 2 Alliance Trust Co., 659 ft. from N line and 1,460 ft. from W line of Sec. 34-11s-1w ..... Coring hard brown shale 4,061 ft.
Pure Oil Co.'s No. 2 Mulvey, Sec. 34-11s-1w, 1,515 ft. from N line and 1,150 ft. from E line of tract ..... Spudded.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 38 Watkins, 991 ft. W and 1,200 ft. N of SE cor. of Sec. 13-12s-10w ..... Set 1 jt. screen 2,976 ft.; comp. flowing 750 bbls. daily, 125 lbs., ⅝-in. choke.
Wilfred Lahaye's No. 1 Olevia, Sec. 36-12s-10w, in 2-acre tract ..... Spudded and shut down.

Lackawanna Oil Co.'s No. 1 Ellender, 320 ft. S and 150 ft. E of NW cor. of SE SE of Sec. 21-12s-10w ..... Derrick.
Maesert & Cruse's No. 1 J. B. Duhon, 656 ft. S and 325 ft. E of NW cor. of Sec. 26-12s-10w ..... Derrick.
Union Sulphur Co.'s No. 4 Gulf Land-Humble lease, 710 ft. N and 330 ft. W of SE cor. of Sec. 11-12s-10w ... Drlg. shale 5,420 ft.
Union Sulphur Co.'s No. 2 Gulf Land-Pure lease, 1,958 ft. N and 200 ft. W of SE cor. of Sec. 11-12s-10w ... Drlg. sandy lime 6,370 ft.
Yount Lee Oil Co.'s No. 11 School land, 2,810 ft. W and 1,608 ft. N, SE cor., Sec. 15-12s-10w ..... Heaving shale 5,804 ft.; abnd.

CHOCTAW—IBERVILLE PARISH

Standard Oil Co.'s No. 3 Gay, 530 ft. S and 200 ft. E of C of Sec. 52-9s-11e ..... Rig.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 6 Wilbert, Sec. 9-11s-12e, 200 ft. out from No. 5 ..... Coring sand showing oil 5,318 ft.

CAMERON MEADOWS—CAMERON PARISH

Magnolia Pet. Co.'s No. 3 Cameron Meadows, 3,620 ft. S and 1,900 ft. W of NE cor. of Sec. 21-14s-13w.... Spudded.

LEESVILLE—LA FOURCHE PARISH

The Texas Co.'s No. 6 L.L.&E., Sec. 26-21s-22e..... Location.

FORT BARRE—ST. LANDRY PARISH

Fort Barre Oil Co.'s No. 1 Sibille (W.O.), Sec. 30-6n-5e, 600 ft. S and 124 ft. E, NW cor. of 30-ac. tr. .... Standing 3,572 ft.

STARKS—CALCASIEU PARISH

Emerson & Stark's No. 2 Industrial, 400 ft. S of No. 1, in SE cor. NE NW, Sec. 30-9s-12w..... No report.

SWEET LAKE—CAMERON PARISH

Pure Oil Co.'s No. 11 Yount Lee, Sec. 12-13s-8w, 300 ft. S 66 deg. 42 min. from No. 9 ..... Drlg. hard sandy lime 3,514 ft.

TEXAS

MISCELLANEOUS WILDCATS

AUSTIN COUNTY

Bunte, Inc.'s No. 1 Dittert, M. N. Allen Sur., 200 ft. SW and 200 ft. NW from W cor. of Henry Vornkahl 16 acres ..... Rig.
Great Southern Oil Co.'s No. 1 Schevojsa, 329 ft. N, 78° E of N cor. B. Dottery Sur. ..... S.D. 2,848 ft.
Tibbett et al's No. 1 Heidman, 4,320 ft. SW along NW line from most northerly corner of A. Larrison Sur., thence 405 ft. NW at right angles ..... Derrick.

BRAZORIA COUNTY

Danciger O. & R. Co.'s No. 1 W. C. Hunt, Pledger, 5,220 ft. from the N line and 6,500 ft. from E line of W. Coirson Sur. ..... Sand showing oil 6,758-82 ft.; 7⅝-in. csg. at 6,753 ft.; preparing to set screen.
John Deering's No. 1 C. W. Chapman, 294 ft. from S line and 104 ft. from E line of Lot 3, Andrew Robinson Sur. ..... Sand rock 5,788 ft.; fishing drill pipe.
Gulf Prod. Co.'s No. 1 American National, E. R. Bradley Sur. No. 12, 7,594 ft. E and 900 ft. N of SW cor. of 1,472-acre tract ..... Drlg. sand 3,642 ft.
Gulf Prod. Co.'s No. 1-B H. P. Lockwood, Wiley Martin Sur. No. 9, 3,024 varas S, 45° W along SE line of Lockwood 536-acre tract from E cor., thence 241 varas NW at right angles from said line ..... Drlg. hard sand 4,897 ft.
A. D. Parsons et al's No. 1 Hughes, 1,500 varas, NE from W cor. along NW line of A. L. D. Lewis Sur., and 200 varas SE at right angles in Hughes 320-acre tract ..... No report.
Shell Pet. Corp.'s No. 5 Blakely-Winston, Danbury, 1,410 ft. N 68° and 1,200 ft. N 27° W of SW cor. of H.T.&B. Sur. No. 14 ..... Salt 5,040-75 ft.; abnd.
Tri-fin Oil Co.'s No. 1 Moers, 1,635 ft. southwest of Chocolate Bayou and 693 ft. SE of NW line of F. Moore Sur. ..... S.D. 2,550 ft.

BURLESON COUNTY

Ball & Knob's No. 1 Polansky, M. B. Lawrence Sur., 350 ft. from E line and 469 ft. from N line of 158-ac. tr. ..... No report.
E. M. Bracey et al's No. 1 Bracey, J. Lastly Sur., 880 ft. from E cor. of P. Taylor 110 acres, SE along NE line of J. G. Houston 160 acres, thence 180 ft. at right angles in 3-acre tract ..... S.D. 2,340 ft.
Sampson Oil & Gas Co.'s No. 3 Duckworth & Gilley, P. Singleton Sur., 50 ft. SE of No. 1 ..... No report.
J. E. Stubblefield et al's No. 1 Mitchell, A. T. Woolridge Sur., 81 ft. SW and 4,340 ft. SE of S cor. of Joseph Henson Sur. ..... Gumbo 600 ft.; standing.

CHAMBERS COUNTY

Weaver-Ray's No. 1 Fisher, John Tjams Sur., 210 ft. S of Rucker et al's No. 1 Fisher ..... No report.
Yount Lee Oil Co.'s No. 1 Plummer, H.&T.C. Sur. No. 28, 2,340 ft. from N line and 2,640 ft. from W line of section ..... No report.

COLORADO COUNTY

Smith, Adair et al's No. 1 Barnett, 230 ft. from W line and 330 ft. from S line of Blk. 24, Q. K. Winn Sur. Dry and abnd. 5,250 ft.

FORT BEND COUNTY

Lowrie & Young's No. 1 Jackson Brown, Pilant Lake, Wm. Barrett & Abner Harris Sur., 152 ft. E and 158 ft. N out of SE cor. of Humble 182-acre Brown lease in D. Hale 548-acre tract ..... Bldg. derrick.
Lynch et al's No. 1 Knelts, 690 ft. from NW line and 350 ft. from SW line of Sec. 43, H.&T.C. Sur. ..... Shut down for repairs 672 ft.
Magnolia Pet. Co.'s No. 1 Hampil, H. Christman Sur., 1,242 ft. N and 285 ft. W from SW cor. of J. W. Slavin 28 acres ..... Dry and abnd. 6,295 ft.
Taylor & DeCosta's No. 1 Naylor, 4,350 ft. N, 55 deg. E from SW cor. 653-acre tract in Christman Sur. ..... T.D. 7,014 ft.; standing.
Paul & Gerke's No 1 Krenek, Gale Borden Sur., 150 ft. out of NW cor. of tract ..... Derrick.
Reisinger et al's No. 1 Joe Sitter, Long Point, T. J. Bell Sur., 150 ft. SW and 150 ft. SE of N cor. of 80-acre tract ..... No report.

GALVESTON COUNTY

Humble Oil & Ref. Co.'s No. 1 Rosenkranz, Green's Bayou, center N half of Lot 16, Sarah White Sur.... Shale 6,951 ft.; cmtd. 9⅝-in. csg.

GRIMES COUNTY

Barnett et al's No. 1 Dodd, Timothy Jones Sur. ..... T.D. 2,639 ft; 6⅝-in. csg. 2,660 ft; bailed csg. and swbd. S.W.; standing.
W. J. Brightwell's No. 1 Combs, Samuel Beauman Sur., 350 ft. from S line and 622 ft. E of extreme W line of 276-acre tract ..... Water sand 5,015 ft.; S.D.
Petroleum Southwestern Corp.'s No. 1 Greer Bros., Pat B. O'Connor Sur., 450 ft. S and 200 ft. E of SW cor. of 93-acre tract ..... Derrick.

HARDIN COUNTY

Chas. Paggi's No. 1 Hooks, 200 ft. out of NW cor. of Wm. Slade Sur. ..... S.D. 1,650 ft.
Joe E. Proctor's No. 1 Russell & Teagle, 3,550 ft. E and 2,777 ft. N of NW cor. of Wm. W. Young Sur. .... Shale 3,002 ft.
Republic Prod. Co.'s No. 1 Ben Andrews fee, 1,140 ft. W of Neches River and 345 ft. N at right angles in Van Meter Sur. ..... Drlg. water sand 6,198 ft.

HARRIS COUNTY

T. V. Buckholve & Sons' No. 1 Miller, Arthur McCormick Sur. ..... S.D. 1,310 ft.
Cherry & Pritchard's No. 1 Dr. Griffith, S. Bell Sur., 552 ft. from E line and 60 ft. from N line of 250-acre tract ..... T.D. 756 ft.; cmtd. 10-in. csg. 693 ft.
John Deering et al's No. 2 Warren, T. Snell Sur., 100 ft. SW of No. 1 ..... Drlg. 600 ft.

Indian Hill Oil Co.'s No. 1 Schiveinle, Wm. White Sur., 900 ft. S 80° W of NW cor. of Lienberger 10-ac. tract in Blk. 1 ..... Dry and abnd. 6,110 ft.

JASPER COUNTY

Gulf Prod. Co.'s No. 1 Miller Vidor, 2,893 ft. S and 113 ft. E of NW cor. of Sarah Gray Sur. ..... Coring sand 6,470 ft.
Houston Oil Co.'s No. 1 Richardson fee, 2,000 ft. S and 2,002 ft. W of NE cor. of Ben Richardson Sur. ..... Drlg. water sand 5,432 ft.
Smitherman, Neilson & Noble's No. 1 Cameron, SE cor. of Cameron Lbr. Co. tract, Wm. Jones Sur. ..... Location.

JEFFERSON COUNTY

Coastal Oil Co.'s No. 1 Young, 250 ft. from E line and 160 ft. from S line of 40-acre tract in Blk. F-5, Lot 6, Joseph Grigsby Sur. ..... Drlg. sand and shale 3,445 ft.
Sam & Pipkin's No. 2 Broussard, John McGaffey Sur., 150 ft. due E of No. 1 ..... Shut down 1,869 ft.
Jack Schultz' No. 2 Todd, Cheek, 1,800 ft. S of No. 1 and 120 ft. E of W line of Wm. Carr Sur. ..... No report.

LIBERTY COUNTY

Leon Brisley's No. 1 J. M. Neal, Edward Tanner Sur., 1,800 ft. E. 1,300 ft. N of most westerly NW cor. of Margaret Evans Sur. ..... Drlg. shale 2,753 ft.
Mayes et al's No. 1 Dunman, J. C. Martin Sur., 1,111 ft. from S line of survey and 2,360 ft. W of Trinity River ..... Spudded and shut down.

MATAGORDA COUNTY

Cockburn Oil Corp.'s No. 5 Hawkins, Shepherds Mott, 2,200 ft. SE and 1,300 ft. NE of W corner of Daniel McCarthy Sur. ..... Drlg. 705 ft.
Dr. Griffith et al's No. 3 Baer, Big Hill, 5,000 ft. N, 1,000 ft. E from SW cor. of Seth Ingram Sur. ..... Standing 2,730 ft.
Humble Oil & Ref. Co.'s No. 1 Pierce Est., Isaac Foster Sur., 330 ft. from N line and 330 ft. from E line of tract ..... Shale 2,120 ft.; running 13⅜-in. csg.
Rugeley et al's No. 1 Cleveland, E. Hall Sur., 450 ft. E of Cottonwood Creek and 200 ft. N of S line of 40-acre tract ..... No report.
R. L. Sprinkle et al's No. 1 Turner, 4,900 ft. from NE line and 3,800 ft. from SE line of M. Cummings Sur. ..... Derrick.

MONTGOMERY COUNTY

A. H. Parsons et al's No. 2 Drought, Kronknite Sur., 2,000 ft. N and 100 ft. E of NW cor. of A. B. Hill 46½ acres ..... Drlg. shale 1,927 ft.
Rheubotham et al's No. 1 A. H. Salls, Wm. Barker Sur., 390 ft. from E line and 400 ft. from N line of W 26 acres of Salls tract ..... Spudded and S.D.
Sutton-Hawkins' No. 1 Foster, Rosea de la Garza Sur., 2,333 ft. N and 1,320 ft. E of NE cor. of W. J. Johnson 100-ac. tract ..... Standing 3,849 ft.

NEWTON COUNTY

L. A. James et al's No. 1 Price, T.&N.O. Sur., 1,000 ft. from W line and 500 ft. from N line of tract ..... S.D. 1,980 ft.
Sun Oil Co.'s No. 1 Peavey Moore Lbr. Co., 2,145 ft. from S line and 1,225 ft. from W line of F. Stoevar Sur. No. 4 ..... Dry and abnd. 7,222 ft.

ORANGE COUNTY

Republic Prod. Co. and Houston Oil Co.'s No. 1 Hurst fee, 2,000 ft. W and 2,200 ft. N of SE cor. of Ed Hurst Sur. No. 15 ..... Drlg. shale 3,743 ft.
E. L. Smith Oil Co.'s No. 1 Miller-Vidor, 750 ft. E and 300 ft. N of SW cor. of J. M. Swisher Sur. No. 3. ... Drlg. shale 4,567 ft.

POLK COUNTY

Anderson et al's No. 1 Duke, Peter J. Manard Sur., 330 ft. out of NW cor. of 235-acre tract ..... Drlg. shale 3,015 ft.
Koch & Stevens' No. 1 Ruth Lawrence, Castillian Sur., 300 ft. from W line and 790 ft. from S line of 54-acre tract ..... S.D. 2,500 ft.
Tony & Purdy's No. 1 Martha Roberts, Joaquin T. De Rumayor Sur. ..... T.D. 3,656 ft.; sidetracked at 2,500 ft. and drlg. shale 3,026 ft.
Dick Schwabb and Shell Pet. Corp.'s No. 2 Davis & Holmes, A. Viesca Sur., 485 ft. N and 376 ft. W of NE cor. of J. Duff 35 acres ..... Drlg. shale 3,632 ft.

REFUGIO COUNTY

Gulf Prod. Co.'s No. 3 O'Connor, C.E.P.I.&M. Co. Sur. No. 133, 6,225 ft. SW along SE line from NE cor. of John O'Connor land, thence 2,639 ft. NW at right angles ..... Rig.
Humble Oil & Ref. Co.'s No. 3 O'Connor, Florentine Rice Sur., 13,757 ft. from S line at right angles and 3,412 ft. from E line at right angles of 5,545-acre ranch ..... Sand 3,129-43 ft.; set screen; swabbing.

SAN JACINTO COUNTY

Weaver et al's No. 1 Delta Land & Timber Co., 1,400 ft. NE of SW line of James W. Robertson Sur., and 800 ft. at right angles ..... Derrick.

TRINITY COUNTY

C. M. Beckner's No. 1 Gibson, Wm. Beasley Sur., 600 ft. S along E line of survey and 150 ft. W at right angles ..... Sand showing gas 1,001-32 ft.; cmtd. 8-in. csg. 935 ft.

TYLER COUNTY

Republic Prod. Co. and Houston Oil Co.'s No. 1 Sam Jeffcoat, E. Thompson Sur., 467 ft. N and E from SW cor. of 100-acre tract ..... Location.
Republic Prod. Co. and Houston Oil Co.'s No. 1 Kirby, E. Thompson Sur., 467 ft. N and E from NE cor. of Sam Jeffcoat 100 acres ..... Derrick.
Republic Prod. Co. and Houston Oil Co.'s No. 1 Sterne fee (W.O.), 8,384 ft. from W line and 484 ft. from N line of Adolphe Sterne Sur. ..... Drlg. shale 4,892 ft.; tested S.W. 4,776-79 ft.

VICTORIA COUNTY

Gulf Prod. Co.'s No. 2 Keeran Ranch, Martin DeLeon Sur., 1,320 ft. NW of No. 1 ..... Drlg. sand 3,645 ft.
Houston Oil Co. and Magnolia Pet. Co.'s No. 1 Beck, I.R.R. Sur. No. 24, 1,000 ft. NE along NW line from most westerly west cor. of Lot D and 600 ft. SE at right angles ..... Drlg. shale 4,866 ft.
Slick-Seeligson Corp.'s No. 2 McFaddin (D.D.), J. Varian Sur., 1,100 ft. NE of SW line and 635 ft. E of railroad ..... No report.
The Texas Company's No. 5 McFaddin, 1,300 ft. westerly and 300 ft. northerly at right angles from SE cor. of J. A. McFaddin 98-acre Sur. ..... Gumbo 1,132 ft.; cmtd. 13⅜-in. csg. 1,120 ft.
Union Oil Co.'s No. 2 Keeran, Martin DeLeon Sur., 500 ft. E of E line of Gulf lease and 1,900 ft. N of railroad ..... Drlg. sticky shale 4,475 ft.

WALLER COUNTY

Birdwell et al's No. 1 Robertson, John Baker Sur., 1,625 ft. from S line and 450 ft. from W line of 64-acre tract ..... Derrick.
Hobson et al's No. 1 Joe W. Harris, 3,000 ft. from E line and 5,000 ft. from N line of H.&T.C. Sur. in Harris 1,475-acre lease in Justo Liendo Sur. ..... Fishing drill pipe 4,857 ft.

WASHINGTON COUNTY

Yequa Oil Co.'s No. 18 Pomacal, S. M. Williams Sur., 1,282 ft. from W cor. of Shulz 44-acre tract, thence 123 ft. NW at right angles ..... T.D. 1,515 ft.

WHARTON COUNTY

Cullen & West's No. 1 Hawes, G. W. Singleton Sur., 530 ft. NE and 320 ft. SE of W cor. of Hawes' 143-acre tract ..... No report.
Cullen & West's No. 1 J. D. Hudgins, Alexander Jackson Sur., 330 ft. out of S or SE cor. of J. D. Hudgins' 319-acre tract ..... No report.
Gantt et al's No. 1 Laura Hahn, N. Manch Sur., 330 ft. out of NE cor. 142.17-ac. tract ..... S.D. 5,540 ft.
Smith & Daniels' No. 1 Mitchell, H.&T.C. Sur. No. 8, 330 from NE line of NE 80-acre tract in C of tract NW and SE ..... Drill stem test 5,488 ft.; showed S.W.
Steed Prod. Co.'s No. 1 Tucker, 210 ft. W and 50 ft. N of NE cor. of S½ of SW¼ of Sec. 58, E.T.R.R. Sur. ..... Rigging up.

SOUTH LOUISIANA

BEAUREGARD PARISH

DeRidder Dev. Co.'s No. 1 McMahon, 200 ft. W and 156 ft. S of NE cor. of NW of Sec. 33-3s-9w ..... Standing 1,286 ft.

CALCASIEU PARISH

Cannon & Hughes' No. 1 J. S. Reed, Sec. 18-10s-12w... Derrick.
I. R. Irvine et al's No. 1 A. D. Mimma, 741 ft. N and 741 ft. W of SE cor. SE NE, Sec. 20-9s-7w..... Sticky shale 1,575 ft.

JEFFERSON DAVIS PARISH

S. D. Finly's No. 1 Clarphy Lognion, SW NW of Sec. 22-10n-4w ..... Spudded and S.D.

LA FOURCHE PARISH

Lechner & Hubbard's No. 1 Lollain, 150 ft. out of SE cor. of NW NW of Sec. 32-18s-22e ..... Spudded.

PLAQUEMINES PARISH

The Texas Co.'s No. 6 Garden Island Bay, 1,843 ft. S and 2,497 ft. W of NE cor. of Sec. 107-23s-32e ..... Blew out 816 ft.

TERREBONNE PARISH

The Texas Co.'s No. 7 Calliou Island, 300 ft. S and 300 ft. W of NE cor. of Sec. 19-23s-20e ..... Driving piling.
The Texas Company's No. 17 State-Lake Barre, 1,476 ft. W and 626 ft. S of NW cor. of Sec. 20-21s-20e ..... Salt 2,979-4,436 ft.; milled out 1,027 ft. and drlg. sidetracked hole.
The Texas Company's No. 4 Lake Barre-L.L.&E., 3,803 ft. S and 2,075 ft. W of NW cor. of Sec. 30-21s-20e in Sec. 36-21s-19e ..... Drlg. 2,200 ft.

VERMILLION PARISH

Shell Pet. Corp.'s No. 1 Hebert, 2,310 ft. W and 330 ft. N of SE cor. of Sec. 10-15s-1e ..... Location.

VERNON PARISH

Minerals Division Hiano Co.'s No. 1 Llano Del Rio, 543 ft. E and 300 ft. S of NW cor. of NW of Sec. 34-3n-9w ..... No report.

Wildcat Operations in Louisiana-Arkansas

(Continued from Page 50)

E. J. Stanberry's No. 1 Naborton O. & G. Co., Sec. 32-13-11 ..... Moving in new rig; T.D. 800 ft.
State Drlg. & Prod. Co.'s No. 1 Wemple, 330 ft. N and E, SW cor. NW SW Sec. 14-12-11 ..... Rig up.
Walters-Nicholson, tr.'s No. 1 Jim Guy, Sec. 3-11-13.... Recmtd. split csg; W.O. 2,765 ft.
Warren & Craig's No. 1 J. A. Wagner, 150 ft. S and W, from C, Sec. 5-12-14 ..... Set 10-in. 100 ft.
Jack Whitson's No. 1 Sanders, 330 ft. N and E, SW cor. Sec. 19-11-13 ..... Small show gas; W.O. 1,961 ft.

GRANT PARISH

A. W. Phillips, tr.'s No. 1 Cameron, 300 ft. N, 300 ft. E, SW cor. SW NW Sec. 26-7-3w ..... Location.
O. Robichaux's No. 1 T. M. Bradford, 1,870 ft. E, 314 ft. S, NW cor. Sec. 16-9n-1e ..... Derrick.

LINCOLN PARISH

Loring Oil Co.'s No. 1 Simonton, 300 ft. N, 480 ft. E, SW cor. SE NE Sec. 25-20-4w ..... Drlg. 3,540 ft.

MOREHOUSE PARISH

Feazel & Kaill's No. 1 Davenport, Sec. 28-21-6e ..... S.D. 2,510 ft.
H. W. Snowden's No. 1 Meyers, 330 ft. S and E, SW cor. NE NE Sec. 15-22-7e ..... S.D. 30 ft.

NATCHITOCHES PARISH

Allender & Rasmussen's No. 1 Cane River, 330 ft. N and W, SE cor. Sec. 61-6n-5w ..... S.D. 100 ft.
W. M. Coates' No. 1 Ross Olive, Sec. 10-9-10, 660 ft. S and E from cen. of Sec. ..... S.D. 2,010 ft.
Dr. H. S. Gerson's No. 1 Smith, Sec. 11-10-8, 2,000 ft. N, NE cor. of irregular Sec. 10, in Sec. 11 ..... T.A. 1,875 ft.
J. B. Oil Co.'s No. 1 Hankins et al, Sec. 67-10-7 ..... Reaming; T.D. 520 ft.
R. A. Keaton's No. 1 Bastrop State Bank, 200 ft. N and W, SE cor. NE NW Sec. 17-10-6 ..... Location.
R. A. Keaton's No. 1 Stephens, Sec. 25-10-6, 320 ft. N and W, SE cor. NW NW ..... S.D. 1,700 ft.
Natchitoches Pet. Co.'s No. 1 Edenbarn, 2,240 ft. W, 1,320 ft. S, NE cor. Sec. 4-11-6w ..... S.D. 2,234 ft.
H. W. Perritt's No. 1 Cook, 165 ft. E, 105 ft. N, SW cor. NE SW Sec. 3-8-9 ..... S.D. 2,993 ft.
Sabine Bayou Dev. Co.'s No. 1,130 Caw, 330 ft. N and E, SW cor. SE Sec. 9-12-5 ..... S.D. 2,600 ft.
Texana Oil Co.'s No. 1 Clark-Morris Lbr. Co., 878 ft. N, 560 ft. E, C, Sec. 23-5-6 ..... Set 6⅝-in. 3,300 ft; arranging to test; T.D. 3,475 ft.

OUACHITA PARISH

Milhivan Gas Corp.'s No. 1 W. Va. L. & T. Co., 1,980 ft. E, 1,320 ft. N, center Sec. 10-17-5e ..... Location.
Monroe Oil & Royalties Co.'s No 1 Thieler, 150 ft. N and E, SW cor. SE NW Sec. 34-18-2e ..... S.D. 2,575 ft.
Wilson & Mitchell's No. 1 Williams, Sec. 5-16-1e, 330 ft. E, 340 ft. S, NW cor. SW SE ..... S.D. 3,480 ft.

RAPIDES PARISH

Pet. Industries, Inc.'s No. 1 Lee Lbr. Co., 330 ft. N, 300 ft. W, SE cor. NW SE Sec. 13-5n-2e ..... Derrick.

RED RIVER PARISH

Edward & Clay's No. 1 Delta Pecan Co., 1,600 ft. N, 450 ft. E, SW cor. Sec. 27-13-11 ..... S.D. 1,175 ft.
G. T. Shaw et al's No. 1 Wilkinson, 300 ft. N, 460 ft. W, SE cor. NE SE Sec. 4-12-10 ..... Location.

RICHLAND PARISH

Humble Prod. Co.'s No. 1 fee, SW NW Sec. 11-14-6 ..... Location.

SABINE PARISH

Adams & Roberson's No. 1 Peterson, 400 ft. N, 200 ft. W, SE cor. NE NE Sec. 35-8-13 ..... S.D. 100 ft.
R. E. Brooke's No. 1 A. Gray, 330 ft. N and W, SE cor. SW NE Sec. 35-8-13 ..... Location.
John R. Bunn's No. 1 Sabine Lbr. Co., 295 ft. S, 336 ft. W, NE cor. SW NE Sec. 9-7-13 ..... T.A. 2,422 ft.
Byers et al's No. 1 Bishop, SW cor. SW NE Sec. 16-7-13. S.D. 41 ft.
Cloud & Bolin's No. 1 Bowman-Hicks, SE cor. NE NE Sec. 26-9-13 ..... Set 8⅝-in. 1,705 ft; T.D. 1,707 ft.
Coates Pet. Co.'s No. 3 Stille, 330 ft. N and E, SW cor. Sec. 35-8-13 ..... Location.
Mark Curtis et al's No. 1 Sabine Lbr. Co., 330 ft. N and W, SE cor. NE SE Sec. 35-8-13 ..... S.D. 2,400 ft.
B. Q. Daniels' No. 1 Armstrong, SE cor. SE NE Sec. 31-8-10 ..... Derrick.
Mrs. Dabney's No. 1 Hill, 265 ft. N, 235 ft. W, SE cor. NE NE Sec. 5-7-11 ..... Location.
Mrs. Dabney's No. 2 Hill, 230 ft. S, 235 ft. W, NE cor. Sec. 5-7-11 ..... Location.
Flinchbaugh & Myers' No. 1 Aaron, 250 ft. S and E, NW cor. Sec. 32-9-13 ..... Rigged up on second hole; W.O.
R. L. Gay, tr.'s No. 12 Bowman-Hicks, 330 ft. S, 390 ft. W, NE cor. SW SW Sec. 14-7-14 ..... Cmtd. bottom of hole 2,791 ft.
R. L. Gay, tr.'s No. 1-A Long Bell Lbr. Co., 430 ft. S, 200 ft. W, NE cor. NW NW Sec. 10-8-13 ..... Coring shale 753 ft.

Gibson & Johnson, Inc.'s No. 2 Frost Lbr., 330 ft. S and W, NE cor. NW NE Sec. 15-9-13 ..... Swabbing at 10 bbls. oil 1,516 ft.
W. N. Hankins' No. 1 Tilley, 200 ft. E, 30 ft. S, NW cor. SE SE Sec. 30-8-12 ..... Swedging out 6-in. csg. 2,162 ft.
R. T. Henderson's No. 1 Sistrunk, 450 ft. N, 150 ft. W, C, Sec. 9-9-12 ..... Location.
Hells et al's No. 1 Sabine State Bank, 350 ft. N and W, SE cor. SW SW Sec. 28-8-11 ..... S.D. 1,025 ft.
Ab Jones' No. 1 Garcia, 200 ft. S and W, NE cor. NW SE Sec. 4-7-13 ..... Set 6-in. 2,070 ft.
G. E. Jordan's No. 1 Dew, 330 ft. N, 340 ft. E, SW cor. SW SE Sec. 34-8-11 ..... S.D. for wtr. 950 ft.
E. P. Kilgore's No. 1 Thomas, 330 ft. S, 200 ft. E, NW cor. SE Sec. 30-8-11 ..... Comp. flowing 1,000 bbls. 2,341 ft.
Lane, Bundy & Allen's No. 1 Andree, Sec. 22-7-11 ..... Derrick.
C. D. Lee, tr.'s No. 1 Whitney, 330 ft. N and W, SE cor. NW NE Sec. 12-9-14 ..... Drlg. 700 ft.
H. C. Maulding's No. 1 Moores, 330 ft. S and W, NE cor. SE NE Sec. 16-7-13 ..... Tested dry; 2,494 ft.
Ben Merritt's No. 1 Lacina, 400 ft. N, 378 ft. E, SW cor. SW NE Sec. 4-8-12 ..... Derrick.
Paul L. Miller, tr.'s No. 1 Chadick, 550 ft. S, 178 ft. E, NW cor. NE SW Sec. 32-8-10 ..... Comp. pumping 40 bbls. 2,589 ft.
M. F. Neely's No. 1 Rains, 660 ft. N, 100 ft. W, SE cor. SW NW Sec. 14-7-11 ..... Comp. pumping 40 bbls. 2,540 ft.
W. M. Neely's No. 1 Buvens, 350 ft. S, 100 ft. E, NW cor. NE Sec. 31-7-11 ..... T.A. 2,458 ft.
C. D. Neff, tr.'s No. 1 Snell, Sec. 9-7-11, 350 ft. N, 460 ft. W, SE cor. Sec. ..... W.O.S.R. 2,509 ft.
H. W. Perritt's No. 3 Brown Lbr. Co., 519 ft. S, 455 ft. W, NE cor. NW NE, Sec. 31-8-10 ..... Drlg. 750 ft.
Roy Raines et al's No. 1 Beard, 720 ft. E, 700 ft. N, SW cor. SW SE Sec. 8-8-10 ..... Set 10-in. 41 ft; S.D. 250 ft.
Reeves & McNeely's No. 1 Ponder, 330 ft. N and W, from C, Sec. 15-7-11 ..... Began Nov. 7; cmtd. 10-in. 21 ft.
Thornton et al's No. 1 S. S. Martines, 355 ft. S, 330 ft. W, NE cor. SE NE Sec. 4-7-13 ..... S.D. 2,048 ft.
Otis A. Roberts' No. 1 Sabine Lbr. Co., 224 ft. S, 481 ft. W, NE cor. SW NE Sec. 5-7-13 ..... S.D; W.O. 2,500 ft.
Roberts & Sledge's No. 1 La. Long Leaf Lbr. Co., 290 ft. N, 468 ft. E, SW cor. NE SE Sec. 29-8-10 ..... Derrick pattern.
Roberts & Sledge's No. 2 Sabine Lbr. Co., 305 ft. W, 796 ft. N, SE cor. SE SW Sec. 5-7-12 ..... W.O.S.R. 2,480 ft.

CONVERSE DISTRICT

Alford & Cleary's No. 1 Jackson, 330 ft. N and E, SW cor. SE NW Sec. 10-9-13 ..... Location.
Alford & Cleary's No. 1 Patrick, 330 ft. S and W, NE cor. SW NE Sec. 11-9-13 ..... Location.
H. P. Koy's No. 1 T. J. Paul, 120 ft. S, 110 ft. W, NE cor. Blk. 25, Converse townsite in Sec. 10-9-13 ..... Location.
H. C. Lessenger's No. 1 Bowman-Hicks, 330 ft. S, 330 ft. E, NW cor. Sec. 13-9-13 ..... Location.
Lee & Burentt's No. 1 Burckett, 330 ft. N and W, SE cor. NW SW Sec. 10-9-13 ..... Top marl at 1,407 ft; cmtd. 6-in. 1,500 ft.
Rockmill et al's No. 1 Bowman-Hicks, 330 ft. S and W, NE cor. NW Sec. 36-9-14 ..... Rigging up.
Nick Barbare's No. 1 Ryals, 330 ft. S and E, NW cor. Sec. 27-9-13 ..... Began Nov. 12; cmtd. 10-in. 45 ft.
Rockmill et al's No. 1 Patrick, 330 ft. S, 330 ft. E, NW cor. NE NW Sec. 21-9-13 ..... Derrick.
E. M. Self's No. 1 Paul, 330 ft. N and W, SE cor. NE SW Sec. 9-9-13 ..... Derrick.
Service Drlg. & Royalty Corp.'s No. 1 Whitney Corp., 330 ft. N and W, SE cor. Sec. 32-10-13 ..... Rigging up.
Ben Youngblood et al's No. 1 Burket, 330 ft. S and W, NE cor. NE NW Sec. 10-9-13 ..... Derrick.
Roshko & Labarre's No. 1 Maines, 427 ft. E, 114 ft. N, SW cor. SE NE Sec. 35-8-11 ..... Began Nov. 4; cmtd. 12½-in. 196 ft.
Sabine Prod. Co.'s No. 1 Whiting Corp., 150 ft. N and E, SW cor. Sec. 4-9-13 ..... Top marl 1,470 ft. and cmtd. 8-in.
Silvey & O'Mara's No. 1 Sabine Lbr. Co., 360 ft. S, 600 ft. W, NE cor. SW NE Sec. 9-7-13 ..... Set 8-in. 42 ft; drlg. 1,462 ft.
Skidmore & Mize's No. 1 Stoker, 440 ft. N, 335 ft. E, SW cor. SE NW Sec. 33-8-10 ..... S.D. 1,450 ft.
C. W. Smith et al's No. 1 Pattison, 330 ft. S and E, NW cor. SE NW Sec. 32-10-11 ..... Derrick.
Southland Drlg. Co.'s No. 1 Frost Lbr. Co., 330 ft. N and W, SE cor. NE NE Sec. 13-9-11 ..... S.D. 1,920 ft.
H. B. Stacey et al's No. 1 Hefkobita, 457 ft. N, 583 ft. E, SW cor. SE Sec. 34-8-13 ..... S.D. 2,652 ft.
Thornton et al's No. 2 S. S. Martines, 312 ft. E, 205 ft. S, NW cor. SE NE Sec. 4-7-13 ..... Location.
Triangle Drlg. Co.'s No. 1 La. Long Leaf Lbr. Co., 330 ft. N and W, SE cor. Sec. 11-6-11 ..... S.D. 4,013 ft.
W. M. Underman's No. 1 F. Cross, 53 ft. S, 146 ft. W, NE cor. SW SE Sec. 25-8-11 ..... Rigging up.

TENSAS PARISH

H. V. Schumacker's No. 1 Currey, 1,320 ft. S, 1,320 ft. E, NW cor. Sec. 39-11-13 ..... S.D. 3,645 ft.

UNION PARISH

S. S. Goens et al's No. 1 Frost Lbr. Co., 330 ft. S and E, NW cor., Sec. 17-22-2e ..... Rigging up.
W. D. Wingfield et al's No. 1 Union Sawmill Co., 330 ft. N and E, SW cor. Sec. 27-23-1e ..... Began Nov. 13; cmtd. 10-in. 153 ft.
Wong Hing, tr.'s No. 1 Union Sawmill Co., 712 ft. W, 240 ft. N, SE cor. Sec. 15-23-1e ..... S.D. 70 ft.

VERNON PARISH

Earl Jones' No. 1 Willis, 350 ft. N, 400 ft. E, SW cor. SE SE Sec. 32-3n-9w ..... Derrick.
Lisne Co-operative Colony's No. 1 fee, NW NE, Sec. 34-3n-9w ..... Drlg. gummy shale 3,220 ft; lime and gummy shale 3,280 ft.

WEBSTER PARISH

R. E. Silvey et al's No. 1 Drake est., C NE NE Sec. 14-19-10 ..... Rigging up.

WEST CARROLL PARISH

Mamie S. McCurry's No. 1 Richard & Donnaw, 300 ft. N and E, SW cor. Sec. 13-19-9e ..... Rigging up.

WINN PARISH

P.V.T. Oil Co.'s No. 1 Southern Paper Co., 150 ft. S and W, NE cor. SW Sec. 28-13-3 ..... S.D. for 8-in. csg. 1,050 ft.

Arkansas

CLAY COUNTY

S. C. Jeffus' No. 1 Underwood, 510 ft. N, 350 ft. W, C NW SE Sec. 4-20-8 ..... S.D. 1,253 ft.

CLEBURNE COUNTY

Frank S. Craver et al's No. 2 Doniphan Lbr. Co., 700 ft. N, 200 ft. E, SW cor. SW Sec. 34-11-9 ..... Drlg. shale 2,700 ft.

COLUMBIA COUNTY

Kendall Oil Co.'s No. 1 Fullenweider, 300 ft. S and E, NW cor. NE NE Sec. 13-17-22 ..... S.D. 2,441 ft.

DREW COUNTY

Co-Operative Dev. Co.'s No. 1 Ogles, Sec. 35-15-5, 330 ft. S and E, NW cor. NE NW ..... S.D. 3,378 ft.

LAFAYETTE COUNTY

Fox & Langford's No. 1 Coleman Bros., 330 ft. S and E, NW cor. SE SE Sec. 25-16-25 ..... D.S. test 2,740 ft; 18 fourbles S.W; drlg. 2,780 ft.
Chas. McDonald's No. 1 Allen, 400 ft. N and W, SE cor. SE SW Sec. 2-19-26 ..... Drlg. 1,950 ft.
Sam E. Wilson, Jr.'s No. 1 Smith, 330 ft. N and E, SW cor. NW SE Sec. 24-19-25 ..... Derrick.

LINCOLN COUNTY

Lawrence Cook, tr.'s No. 1 McGhee Planting Co., 420 ft. S, 200 ft. W, NE cor. NE SW Sec. 5-8-7 ..... Arranging to set 1,000 ft. of 8-in; T.D. 2,250 ft.

LITTLE RIVER COUNTY

American Portland Cement Co.'s No. 1 fee, 150 ft. S and E, NW cor. SW NE Sec. 21-12-32 ..... Cmtd. 10-in. 100 ft.
M. E. Sanderson's No. 1 Hale, 1,200 ft. E, 800 ft. N, SW cor. SE SE Sec. 22-12-29 ..... S.D. 1,050 ft.

MILLER COUNTY

Dennis & Cubage's No. 1 Head, 150 ft. E, 200 ft. N, SW cor. Sec. 20-15-26 ..... D.S. test 2,762-90 ft; S.W.
Duluth-Ark. Oil Co.'s No. 1 Beck, 150 ft. N, 170 ft. E, SW cor. NW SW Sec. 34-15-26 ..... Top chalk 1,616 ft; drlg. 1,900 ft.
Fitzwater et al's No. 1 C. J. Norsen, SW cor. SE SW Sec. 20-15-27 ..... S.D. 1,960 ft.
Fitzwater et al's No. 2 Beck, 150 ft. N and E, SW cor. SW SE Sec. 33-15-26 ..... Moving in rig.
Fitzwater et al's No. 1 Fouke, 150 ft. S and W, NE cor. Sec. 11-17-27 ..... S.D. 105 ft.
Wm. S. King's No. 1 Beck, 330 ft. S and E, NW cor. NE NW Sec. 35-15-26 ..... S.D. red beds 3,218 ft.
Chas. B. Lenz's No. 1 Dean, 125 ft. E, 200 ft. S, NW cor. SE Sec. 19-15s-25w ..... Drlg. 2,575 ft.
W. E. Noel et al's No. 1 Dickson hrs., 1,980 ft. W, 660 ft. S, NE cor. Sec. 11-20-27 ..... S.D; W.O. 2,600 ft.
John C. Rogers' No. 1 Price, 230 ft. S, 400 ft. E, NW cor. NW NW Sec. 17-16-25 ..... Rigging up.
Bob Simmons' No. 1 Lamb, NE NW NW Sec. 14-16-27 .. Derrick pattern.
Sorrells & Tidwell's No. 1 Roy McCowan, 660 ft. S and E, NW cor. NW SE Sec. 22-15-28 ..... Set 10-in. 106 ft; S.D. 400 ft.

OUACHITA COUNTY

McLeon et al's No. 1 L. D. Neely, Sec. 23-15-16, 200 ft. N and W, SE cor. NE SW ..... S.D. 150 ft.
Chas. Steele et al's No. 1 Anderson, 155 ft. S, 150 ft. E, from center Sec. 36-12-18 ..... T.D. 1,015 ft.

PIKE COUNTY

E. R. Henderson's No. 1 J. L. Lee, 400 ft. S, 350 ft. E, NW cor. SW SE Sec. 31-8-24 ..... S.D; W.O. 1,020 ft
E. R. Henderson's No. 1 W. B. East, 200 ft. S, 150 ft. W, NE cor. Sec. 13-9-23 ..... S.D; rig.

PRAIRIE COUNTY

Powell Creek O. & G. Co.'s No. 1 Kloss, NE SW Sec. 3-4n-6w ..... Partly rigged up and S.D.

ST. FRANCIS COUNTY

E. R. Henderson's No. 1 Britton, Sec. 1-4-1e, 1,000 ft. S and E, NW cor. NE NW ..... S.D. shale and gumbo 3,725 ft.

UNION COUNTY

Cox et al's No. 1 Goodwin, 360 ft. S, 180 ft. W, NE cor. SW SW Sec. 2-16-16 ..... S.D. 140 ft.
Graves, Ferguson & Fuller's No. 1 Patterson, SW cor. NE NE Sec. 31-19-16 ..... Derrick.
Mamie McCurry et al's No. 1 Rowland, 200 ft. N and E, SW cor. Sec. 9-19-11 ..... Derrick.
Wilson & Chapman's No. 1-A D. Norman, 330 ft. S and E, NW cor. N½ NE SE Sec. 2-18-13 ..... S.D. 1,678 ft.

WASHINGTON COUNTY

(Cable tools)

A. B. Chase and Ed Rogers' No. 1 Cunningham, 125 ft. S, 300 ft. W, NE cor. SW NE Sec. 14-15-33 ..... S.D. 1,750 ft.

WOODRUFF COUNTY

B. F. Thompson's No. 1 Rosser, 500 ft. N and E, SW cor. SE SE Sec. 7-5n-2w ..... Set 10-in. 200 ft; drlg. 440 ft.

East Texas

BOWIE COUNTY

Logan & Elliott's No. 1 Smith, 9,600 ft. S, 2,500 ft. W, NE cor. Chas. Lewis Sur. ..... S.D. 4,505 ft.
Lemford et al's No. 1 W. W. Whybark, 200 ft. S, 200 ft. W, SW cor. J. H. Dyer Sur. ..... S.D. 1,792 ft.

CASS COUNTY

Davis & Pigg's No. 1 Roy Bryan, SW cor. Roy Bryan 88-ac. tr., Albert H. Lattimer Sur. ..... S.D. 2,860 ft.
C. E. Murdock's No. 1 First National Bank, Evans Watson Sur. ..... S.D. 4,390 ft.
John C. Rogers' No. 1 L. E. Lanier, 573 ft. N, 879 ft. W, SE cor. Lanier 35 ac. in K. E. Welborn Sur. .... S.D. 2,280 ft.
John C. Rogers et al's No. 1 W. Q. Henderson, 3,100 ft. S, 3,100 ft. E, NW cor. Wm. Davis Sur. ..... S.D. 960 ft.

HARRISON COUNTY

Great Eastern Oil Co.'s No. 1 Rudd, Wm. Steele Sur. .... Drlg. 950 ft.
R. E. Nash et al's No. 1 Henderson, G. L. Bledsoe Sur.. S.D. 3,485 ft.
Ryan Cons. Pet. Corp.'s No. 1 J. M. Fuhr, 1,300 ft. N of NW cor. T. J. Copelin Sur., 1,675 ft. SW at right angles to NW SE line of O'Neal Sur. ..... Drlg. plug 5,143 ft.

MARION COUNTY

Baunoch Dev. Co.'s No. 1 Miller, 725 ft. N, 1,470 ft. E, SW cor. H. Fulgram Sur. (was Gist, Claunch & Dodson) ..... S.D. 4,580 ft.
Geo. Hindeman et al's No. 1 F. V. Lindsey, 2,500 ft. S, most northerly N line, 3,555 ft. E, most easterly W line, Alexander Albright Sur. ..... S.D. 2,330 ft.
Purcell et al's No. 1 Coker, M. Reed Sur. ..... S.D. 1,957 ft.
Starling & Preston's No. 1 Henderson, R. Bennington Sur. H. R. S. ..... Drlg. 1,440 ft.

PANOLA COUNTY

Root-Skinner's No. 1 Daniel, 600 ft. N and W lines, Mrs. Gerrell 100-ac. tr., SW cor. Isabel Hanks Sur. ..... S.D. for D.S. 740 ft.
J. L. Nelson et al's No. 1 J. Williams, 300 ft. S, 700 ft. W, NE cor. Williams' 67-ac. tr., James Hanks Sur... S.D. 3,055 ft.

SHELBY COUNTY

J. H. Francis' No. 1 John Mims, Mary Smith Sur. ..... Tested dry 2,842 ft; drlg. 3,380 ft; W.O.
General Minerals Co.'s No. 2 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. D. S. Height Sur. ..... Drlg. 3,600 ft.
Oil News' No. 1 Pickering, C. H. Patterson Sur. ..... Reaming 3,360 ft.
Henry Maulding's No. 1 Frost Lbr. Co., NE cor. Frost Lbr. Co.'s 20-ac. tr., A. D. Fountain Sur. ..... Drilled to 50 ft; S.D.
Neil Lease & Oil Well Synd.'s No. 1 W. P. Harvey, NW cor. W. P. Harvey 130 ac. in W. P. Harvey Sur. .... Derrick pattern.
Prairie Creek Crude Co.'s No. 1 Ellington, 150 ft. and 200 ft. W from SE cor. 42-ac. tr., J. Burleson Sur. .. S.D. 3,330 ft. for csg.
Ridgeway et al's No. 1 Polley, Domingues Gonzales Sur., 3,130 ft. E of SW cor., 160 ft. N at right angles of Polley 457-ac. tr. ..... S.D. 3,045 ft.
Redberry et al's No. 1 Pickering Lbr. Co., 600 ft. N, 400 ft. E, SW cor. Jane Stoddard Sur. ..... S.D. 2,375 ft.
Gray & Dunbar's No. 1 C. A. Hayden, 600 ft. N and W, SE cor. 152-ac. tr. in D. T. F. Yordt Sur. ..... S.D. for wtr. 2,280 ft.

Louisiana-Arkansas Proven Areas

North Louisiana

BOSSIER—BELLEVUE AREA

Company, well, farm name, section and block— Remarks:
H. I. Morgan's No. 2 Smith, 1,520 ft. N, 660 ft. W, SE cor., Sec. 22-19-11 ..... Drlg. red shale 2,579 ft.

CADDO—RODESSA AREA

Ark.-La. P. L. Co.'s No. 1 F. E. Gloyd, 660 ft. E, 100 ft. S, NW cor. NW NE, Sec. 34-23-16 ..... Drlg. lime and shale 4,924 ft.
United Gas Public Service Co.'s No. 1 Levee Board, 1,980 ft. N, 1,320 ft. E, SW cor. Sec. 27-23-16..... Location.

CADDO—BETHANY AREA

Calatex O. & G. Co.'s No. 1 Mrs. E. Augura, 3,567 ft. N, 2,600 ft. E, SW cor., Sec. 19-16-16 ..... Rigging up.

CADDO—BLANCHARD AREA

Nick Barbare's No. 1 Puckett, 330 ft. S, 150 ft. W, NE cor., Sec. 6-18-16 ..... Drlg. 100 ft.

Louana O. & G. Co.'s No. 1-A Hammock, 760 ft. S and W, NE cor., Sec. 5-18-16 ..... Tested 5,000,000 ft. gas; cmtd. 6-in. 2,747 ft; T.D. 2,767 ft.

Louana O. & G. Co.'s No. 1 Carrie et al, 1,320 ft. W, 660 ft. S, NE cor. SE, Sec. 32-19-16 ..... Derrick.

Louana O. & G. Co.'s No. 1 Waskom, 660 ft. N and E, SW cor. Sec. 29-19-16 ..... Set 10-in. 50 ft.

DE SOTO PARISH

Abernathy et al's No. 1 J. M. Nabors, 2,485 ft. E, 1,185 ft. N, SW cor. Sec. 32-13-11 ..... Began Nov. 12; cmtd. 10-in. 67 ft; drlg. 510 ft.

MOREHOUSE PARISH

Amalgamated Carbon Co.'s No. 4 Cole, 3,300 ft. N, 2,252 ft. W, SE cor. Sec. 7-19-4e ..... Location.

United Gas Public Service Co.'s No. 9 Sandidge, 200 ft. S of C, Sec. 27-20-4e ..... Cmtd. 5¾-in. csg. 2,103 ft.

RICHLAND PARISH

Pelican Nat. Gas Co.'s No. 2 Noe, 1,320 ft. N, 660 ft. W, SE cor. SW, Sec. 11-17-5e ..... Cmtd. 6-in. 2,290 ft.

SABINE PARISH—ZWOLLE

Abbott & Rankin's No. 1 Nulten, 330 ft. S and E, NW cor. SE NE, Sec. 2-7-13 ..... W.O.S.R. 2,397 ft.

Alexander & Mason's No. 1 R. C. Cooper, 330 ft. S, 297 ft. E, NW cor. NE Sec. 31-8-11 ..... Rig up.

Jule Alford's No. 1 Stoker, 212 ft. N and W, SE cor. NE SW, Sec. 10-7-11 ..... S.D. 2,620 ft.

J. H. Askew's No. 3 Henderson, 400 ft. S, 150 ft. E, NW cor. SW SE, Sec. 31-8-10 ..... Derrick.

J. H. Askew's No. 2-E McNeely, 65 ft. S, 100 ft. W, NE cor. SE NE, Sec. 14-7-11 ..... W.O.S.R. 2,658 ft.

Askew & Ellis' No. 8-E McNeely, 330 ft. N and W, SE cor. NE, Sec. 14-7-11 ..... W.O.S.R. 2,567 ft.

Baird Bros.' No. 3 Martinez, 1,012 ft. S, 907 ft. E, NW cor. NW SW, Sec. 2-7-13 ..... Drlg. chalk 2,250 ft.

Baird, Stone & McFaddin's No. 1 Duggan, 150 ft. S and W, NE cor. SE, Sec. 14-7-11 ..... W.O.S.R. 2,637 ft.

C. W. Beene et al's No. 1 Cutrer, 200 ft. N and E, SW cor. NW, Sec. 12-7-11 ..... Derrick.

Bridges & Clark's No. 4 Williams, 60 ft. N, 250 ft. W, SE cor. NE SW, Sec. 33-10-12 ..... Tested small show oil 3,270 ft.

W. Brumley's No. 1 fee, 330 ft. N and W, SE cor. NW NW Sec. 2-7-11 ..... Derrick.

Cameron Oil Co.'s No. 1 G. Martinez, 345 ft. E, 540 ft. N, SW cor., Sec. 2-7-13 ..... Set 10-in. 41 ft.

Capitol-Crescent Oil Co.'s No. 1 Sabine State Bank, 990 ft. E, 338 ft. N, SW cor. NW SW, Sec. 2-7-13 ..... Derrick.

Capitol-Crescent Oil Co.'s No. 1 Byrd, 340 ft. W, 350 ft. S, NE cor. SE NW, Sec. 1-7-11 ..... Coring 2,390 ft.

T. B. Carpenter's No. 1 Cutrer, 330 ft. S and E, NW cor. SE, Sec. 13-7-11 ..... Began drlg. Nov. 3; cmtd. 10-in. 41 ft; drlg. 780 ft; S.D. for fuel 960 ft.

Colonial Oil Co.'s No. 2 Williams, 1,045 ft. S, 210 ft. E, NW cor. SE NW Sec. 13-7-11 ..... Rigging up.

Continental Drlg. Co.'s No. 1 Leone est., 70 ft. N, 200 ft. W, SE cor., Sec. 31-8-12 ..... Derrick.

Craig et al's No. 1 Pounder, 330 ft. N and E, SW cor. SE NW, Sec. 15-7-11 ..... Derrick.

Crescent Drlg. Co.'s No. 1 Peters, 330 ft. N and E, SW cor. SE SW Sec. 2-7-11 ..... Location.

Edwards & Hubler's No. 1 G. Martinez, 510 ft. S, 280 ft. E, NW cor. SW SW, Sec. 2-7-13 ..... Derrick.

V. R. Hammons et al's No. 1 Travis, 540 ft. N, 150 ft. E, SW cor. NW SE, Sec. 13-7-11 ..... Drlg. 2,417 ft.

D. D. Holcomb's No. 2 Quayhagiew, 149 ft. N, 200 ft. E, SW cor. SE SE, Sec. 11-7-11 ..... W.O.S.R. 2,652 ft.

E. L. Hunt's No. 2 Livingston, 330 ft. S and E, NW cor. SW NW Sec. 9-7-11 ..... Location.

Imperial Producers Co.'s No. 1 Leone Est., 1,334 ft. S, 660 ft. E, NW cor., Sec. 32-8-12 ..... Location.

H. M. Jones' No. 1 Raines, 300 ft. S, 150 ft. W, NE cor. NW NW, Sec. 14-7-11 ..... Cmtd. 6-in. 2,396 ft; T.D. 2,410 ft.

W. F. Lacy's No. 3 Cooper, 180 ft. N, 395 ft. E, SW cor. SW NE Sec. 30-8-11 ..... Began Nov. 12; cmtd. 10-in. 40 ft; drlg. 1,230 ft.

Loring Oil Co.'s No. 21 Bowman-Hicks, 450 ft. S, 275 ft. E, NW cor. SW NW, Sec. 16-7-12 ..... Drlg. shale 4,232 ft.

Magnolia Pet. Co.'s No. 1 Cooper, 250 ft. S, 350 ft. W, NE cor. Sec. 30-8-11 ..... Began Nov. 14; cmtd. 12½-in. 42 ft; drlg. 2,360 ft.

L. M. McGuffin's No. 1 Chadick, 300 ft. N, 275 ft. E, SW cor. NE SE, Sec. 31-8-10 ..... Arranging swab 500 ft. oil; S.D. 2,481 ft.

Paul Miller's No. 2 Chaddick, 109 ft. N, 330 ft. E, SW cor. SE NW Sec. 32-8-10 ..... Location.

C. D. Neff, tr.'s No. 2 Snell, 400 ft. E, 330 ft. N, SW cor. SE SE, Sec. 9-7-11 ..... Rigging up.

E. F. Neely's No. 4 Pounder, 220 ft. E, 225 ft. S, NW cor. SW SW, Sec. 15-7-11 ..... Cmtd. 6-in. 2,335 ft.

E. F. Neely's No. 5 Ponder, 580 ft. S, 870 ft. W, NE cor. Sec. 16-7-11 ..... Began drlg. Nov. 9; cmtd. 10-in. 21 ft.

T. B. Nix's No. 1 W. M. Cooper, 104 ft. S and E, NW cor. Sec. 30-8-11 ..... Derrick.

H. L. Patton's No. 1 Ponder, 330 ft. N and W, C, Sec. 15-7-11 ..... Began Nov. 11; cmtd. 10-in. 21 ft.

Pelican Nat. Gas Co.'s No. 9 Sabine Lbr. Co., 200 ft. N and E, SW cor. NE SW, Sec. 3-7-13 ..... W.O.S.R. 2,400 ft.

Pelican Nat. Gas Co.'s No. 3 Buckley, 330 ft. N and W, SE cor. SW SW, Sec. 31-8-10 ..... Cmtd. 6-in. 2,418 ft; W.O.S.R. 2,502 ft.

Pelican Nat. Gas Co.'s No. 17 La. Long Leaf, 330 ft. S and E, NW cor. NE NW, Sec. 31-8-11 ..... Began Nov. 14; cmtd. 10-in. 100 ft.

T. L. Phillips et al's No. 1 Haley, 330 ft. S and E, NW cor. NW SE, Sec. 6-7-12 ..... Derrick.

Picayune Oil Co.'s No. 1 Porter, 330 ft. N and W, SE cor. NW SW Sec. 30-8-11 ..... Rigging up.

H. C. Pitts et al's No. 1 Trammell, 1,037 ft. S, 150 ft. E, NW cor. NE NE, Sec. 5-7-11 ..... Location.

Ritchie Prod. Co.'s No. 1 Byrd, 503 ft. N, 399 ft. W, SE cor. NE NW, Sec. 1-7-11 ..... Comp. pumping 50 bbls. 2,465 ft.

Rotary Oil Corp.'s No. 1 Hale, 330 ft. S and E, NW cor. SW Sec. 1-7-13 ..... Derrick pattern.

W. H. Rowe et al's No. 1 Cutrer, 330 ft. N and E, SW cor. NE, Sec. 13-7-11 ..... Cmtd. 6-in. top marl 2,452 ft; swabbing 2,612 ft.

C. T. Ruffin's No. 1 Lilly, 545 ft. S, 200 ft. W, NE cor. NW NW, Sec. 8-7-11 ..... 500 ft. oil in hole; W.O. 2,359 ft.

Scully & Beach's No. 4 Lafitte, 225 ft. E, 197 ft. S, NW cor. SW NW, Sec. 13-7-11 ..... Derrick.

Scully & Beach's No. 5 Lafitte, 413 ft. S, 190 ft. W, NE cor. SW NW, Sec. 13-7-11 ..... Arranging swab through tubing 150 ft. in oil; T.D. 2,492 ft.

E. M. Self's No. 2 Henderson, 335 ft. N and E, SW cor. SE SE, Sec. 31-8-10 ..... Drlg. 1,350 ft.

Simmons et al's No. 1 Fleming, E½ SE SE, Sec. 11-8-13 ..... Rigging up.

Skidmore Oil Co.'s No. 3 G. Martinez, 330 ft. S and W, NE cor. SE SE, Sec. 3-7-13 ..... 2,000 ft. oil in hole; W.O.S.R. 2,330 ft.

Scully & Beach's No. 3 Lafitte, 1,030 ft. S, 134 ft. E, NW cor. Sec. 13-7-11 ..... Bailing 2,550 ft.

F. E. Stancill's No. 1 Pounder, 273 ft. S, 397 ft. E, NW cor. NE SE Sec. 16-7-11 ..... S.D. 2,593 ft.

State Prod. Co.'s No. 1 Keaszle, 150 ft. N and W, SE cor. NW SW Sec. 3-7-13 ..... W.O.S.R. 2,427 ft.

State Prod. Co.'s No. 1 Lites, 150 ft. S and W, NE cor. SE SW Sec. 28-8-11 ..... Derrick.

State Prod. Co.'s No. 1 Sabine Lbr. Co., 365 ft. N, 100 ft. W, SE cor. NW SW Sec. 3-7-13 ..... S.D. 2,427 ft.

H. H. Stout et al's No. 1 Byrd, 150 ft. N and E, SW cor. NW NW Sec. 1-7-11 ..... Cmtd. 6-in. 2,332 ft; drlg. 2,493 ft.

The Texas Co.'s No. 5 Stille, 330 ft. N, 1,080 ft. E, SW cor. Sec. 32-8-11 ..... Derrick.

C. H. Tuttle's No. 3 Byrd, 700 ft. E, 510 ft. S, NW cor. Sec. 7-7-10 ..... W.O.S.R. 2,727 ft.

J. H. Watt et al's No. 1 Pounder, 300 ft. S, 135 ft. W, NE cor. NW NE Sec. 15-7-11 ..... Derrick.

D. R. White et al's No. 1 Stille, 620 ft. W, 305 ft. N, SE cor. NE SW Sec. 35-8-13 ..... Set 10-in. 160 ft.

J. P. White's No. 1 Nulton, 330 ft. N and E, SW cor. NE NW, Sec. 1-7-13 ..... S.D. 2,455 ft.

UNION PARISH

Southern Carbon Co.'s No. 62 fee, 1,920 ft. S and W, NE cor. NW Sec. 30-20-4e ..... Cmtd. 6-in. 2,079 ft.

Arkansas

UNION COUNTY—URBANA

Graves, Ferguson & Fuller's No. 1 Patterson, SW cor. NE NE Sec. 31-19-16 ..... Derrick.

Mamie McCurry et al's No. 1 Rowland, 200 ft. N and E, SW cor. Sec. 9-19-11 ..... Derrick.

Wilson & Chapman's No. 3 Emily King, Sec. 3-18-13, 150 ft. S, 150 ft. E, NW cor. NE NE ..... S.D. 1,730 ft.

East Texas

PANOLA COUNTY

Daisy O. & G. Co.'s No. 1 Rucks, John Palmer Sur. .... S.D. 3,359 ft.

Mississippi

RANKIN COUNTY

James Alexander's No. 2 Hurst, 826 ft. E, 560 ft. N, SW cor. NW NW Sec. 7-5n-2e ..... Began Nov. 3; drlg. 600 ft.

Love Pet. Co.'s No. 1 Spann, 1,120 ft. W, 200 ft. S, NE cor. Sec. 13-5n-1e ..... Cmtd. 5 3/16-in. csg.; T.D. 2,437 ft; drlg. plug.

J. A. Matson et al's No. 1 Warner, 1,100 ft. S, 300 ft. W, NE cor. W½ SE Sec. 14-5n-1e ..... Waiting on csg. 2,477 ft.

Wildcat Operations in Mississippi

AMITE COUNTY

Company, well, farm name, section and block—	Remarks:
Magnolia State O. & G. Co.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e	S.D. 400 ft.

CLARKE COUNTY

F. X. Gowans et al's No. 1 Elfring, SE NE Sec. 13-1n-14e	S.D. 104 ft.

HINDS COUNTY

Cleve Love's No. 2 Security Realty Co., 1,855 ft. N, 782 ft. E, SW cor. Sec. 36-6-1e	Derrick.
Love & Lancaster's No. 1 Elton Plantation, C SE Sec. 17-4n-1e	Drlg. chalk 4,082 ft.
National Gas Co. of Miss.' No. 1 M. C. Halder, 160 ft. E, 660 ft. N, SW cor. Sec. 16-6n-1e	S.D. for csg. 810 ft.

JASPER COUNTY

B. B. Jones' No. 1 Bank of Philadelphia, 660 ft. N and W, SE cor. Sec. 35-3n-12e	Set 15¾-in. 161 ft; drlg. 1,535 ft.

LAMAR COUNTY

Chas. W. Gorr et al's No. 1 Jordan, NW cor. SW Sec. 1-2n-15w	Derrick.
Stauffer & Kouri's No. 1 Bond, SE NE Sec. 18-2n-14w	D.S. stuck 3,026 ft.

LOWNDES COUNTY

Lowndes County Oil & Dev. Co.'s No. 1 Carr est., Sec. 34-17-16e, 1,320 ft. E, 330 ft. S, NW cor. Sec.	S.D. 2,200 ft.

MONROE COUNTY

P. J. McAlpine's No. 1 Rye, Sec. 22-15s-17w	S.D. 1,777 ft.

NEWTON COUNTY

Bob Dalton's No. 1 Majure, 400 ft. N, 300 ft. E, SW cor. SE Sec. 25-6n-11e	Drlg. 2,380 ft.

RANKIN COUNTY

Home Oil Prod. Corp.'s No. 1 So. Jackson Land Co., 85 ft. S, 130 ft. W, NE cor. NW NW Sec. 23-5n-1e	S.W. and abd. 2,500 ft.
Love Pet. Co.'s No. 2 Int. Lbr. Co., 450 ft. S and E, NW cor. Sec. 28-6n-2e	T.A. 2,657 ft.
Majestic O. & G. Co.'s No. 1 Elton Lbr. Co., Sec. 10-4n-3e	Derrick.

SCOTT COUNTY

M. U. Culley et al's No. 1 Owens, Sec. 2-8-9	S.D. 750 ft.

WEBSTER COUNTY

P. J. McAlpine's No. 1 Hensley, Sec. 15-21-11	Cored Tuscaloosa 1,800 ft; S.D.

Wildcat Operations in Alabama

LAMAR COUNTY

(Cable tools)

Company, well, farm name, section and block—	Remarks:
DeSoto O. & G. Corp.'s No. 1 Gardner, NW NW Sec. 22-15s-16w	S.D. 3,250 ft.

MOBILE COUNTY

J. C. Prine et al's No. 1 M.&O.R.R., Sec. 33-2n-4w	Drlg. 3,540 ft.

WASHINGTON COUNTY

South Ala. O. & G. Co.'s No. 1 Wilson, Sec. 26-7n-1w	S.D. chalk 2,250 ft.

Wildcat Operations in Southwest Texas

(Continued from Page 58)

Teas and Gant's No. 1 Mikulec, 330 ft. to NW and SW lines of tract in Wm. Barton Sur.	Derrick.
Wilson & Edwards' No. 1 Randall, 150 ft. from S and E lines of tract in Bernard Bymer Sur.	TD. 2,320 ft.; drlg.

BEE COUNTY

Grisham et al's No. 1 Hill, 1¼ miles SW of town of Tuleta	Derrick up.
Nichols & Bruner's No. 1 Grover Heidenfels in John Bryan Sur., 891 ft. from S line, 1,950 ft. from E line of tract	T.D. 2,636 ft.; drlg.

BELL COUNTY

James Scoggins' No. 2 Warrick, 1,000 ft. to NW line, 2,400 ft. to NE line of 335-ac. tract in Ingram Sur.	T.D. 1,432 ft.; fishing.

BEXAR COUNTY

Amaden-Ingersoll-Miller's No. 1 Strumberg, 450 ft. to W line, 1,020 ft. to N line of tract, 12 miles SW of San Antonio	T.D. 1,054 ft.; standing.
S. W. Blount's No. 1-A S. A. Land & Dev. Co., 10 ft. from No. 1 in I. Perez Sur.	T.D. 965 ft.; moving in rotary.
Robert C. Hill's No. 1 Schell, 1,300 ft. from N line, 1,100 ft. from W line of 161-ac. tract in Sec. 234, Perretaux Sur.	T.D. 836 ft.; set csg.
Rollin V. Hill, Sr.'s No. 1 Max Boeck, 1,700 ft. from N line, 2,700 ft. from E line of tract in J. R. Shepherd Sur.	T.D. 390 ft.; drlg.
F. E. Kestler's No. 1 Cover, 330 ft. from S and E lines of tract in Miguel Fortaris Sur. No. 5	T.D. 790 ft.; abnd.
Dr. Ewell Neil's No. 1 J. Watson, 500 ft. from W line, 1,700 ft. from S line of B. Martinez Sur.	T.D. 2,495 ft.; in Edwards, dry.
Otis Oil Co.'s No. 1 Bachmeyer, 150 ft. from NE and SE lines of 425 acres in J. Montez Sur.	T.D. 600 ft.; fishing.
Jones & Veits' No. 1 Bonkowsky, 150 ft. to N and W lines of William McMenenes Sur., 12 miles E of San Antonio	T.D. 907 ft.; standing.
Schneider, Rees et al's No. 2 Claussen, 12 miles NE of San Antonio	T..D 1,330 ft.; S.D.

M. E. Trussell's No. 1 L. B. Carruthers, Sr., 2,000 ft. from W line, 400 ft. from most easterly N line of tract in Sam McCullough Sur. ..... T.D. 1,004 ft.; standing.
H. G. Venable's No. 2 F. Dulling, 1,500 ft. W of center of E line of tract ..... Location.

BLANCO COUNTY

H. T. McGee's No. 1 Forbes, con. Sec. 167 ..... Rigging up.
Hardy Sitton's No. 1 Luders, 150 ft. from S line, 1,420 ft. from E line of James Stanford Sur. ..... T.D. 1,540 ft.; standing.

BROOKS COUNTY

M. P. Evans' No. 1 Amanda Perez, 1,300 ft. from N line, 200 ft. from W line of Sec. 6, La Encantada grant ..... T.D. 1,480 ft.; standing.

CALDWELL COUNTY

Cargill et al's No. 1 Dameron, 150 ft. from N and W lines of 72.5-ac. tract in Dillard Cooper Sur. ..... T.D. 2,018 ft.; bailing oil.
Louis Crouch's No. 1 Sue Neelan, 1,500 ft. to SE lines, 150 ft. from NE lines of 200-ac. tract in John B. Gray Sur. ..... Location.
J. M. Dickson's No. 1 W. T. Mooney, 7,600 ft. from NE line, 5,300 ft. from SE line of Solomon Seal Sur. ..... TD. 2,180 ft.; drlg.
E. D. Herne's No. 1 M. C. and P. W. Jeffrey 126-ac. tract, 150 ft. from N and E lines of tract in James George Sur. ..... Set surface pipe, waiting for wtr.
E. L. Hope and Joe Cole's No. 1 M. August, 150 ft. from NE line, 165 ft. from NW line of tract in A. Floyd Sur. ..... Rigged up.
J. W. Kemp's No. 1 George Vickery, 760 ft. from SE line, 200 ft. from NE line of tract in Squire Damon Sur. ..... T.D. 2,100 ft.; plugging back to 1,750 ft.
Noack & Lanning's No. 1 Barber, 150 ft. from S and E lines of 52-ac. tract in Squire Damon Sur. ..... T.D. 2,200 ft.; tested 3 trebles of oil.
D. V. Smith (C. J. Webster Oil & Gas Co.) No. 1 McMahon, 450 ft. to SW of center of NE line of 50-ac. tract in James Pinchback Sur. ..... Derrick up.

COMAL COUNTY

Caldwell and M. Lanier's No. 1 T. J. Byler, 175 varas from W line, 370 varas from N line of 320-acre tract in H.E.&W.T. Sur., Sec. 394 ..... T.D. 931 ft.; no report.

DIMMITT COUNTY

Motes-Campbell Co.'s No. 1 Denton, 150 ft. from E line, 250 ft. from S line of Tracts 33 and 34 in Sec. 60 of Denton Colony Subd. ..... T.D. 1,400 ft.; drlg.

DUVAL COUNTY

J. E. Anderson's No. 1 Wood-Welder, 115 ft. from W line, 400 ft. from N line of Sur. No. 71 ..... T.D. 2,545 ft.; abnd.
Duggan & Smith's No. 2 Sutherland, 330 ft. from S and W lines of Sur. No. 511 ..... T.D. 2,400 ft.; drlg.
Frank Gravis' No. 3 Schallert in Sur. 355 (Palangana salt dome) ..... T.D. 1,653 ft.; standing.
John Hornbeck's No. 1 Duval County Ranch Co., 150 ft. from S and W lines of Sur. No. 281 ..... Clearing location.
J. A. Leindecker's No. 1 G. W. Sutherland, 550 ft. from E line, 450 ft. from W line of Sur. No. 183 ..... T.D. 2,250 ft.; standing.
Payne & Vernon's No. 1 A. Roach, 865 ft. from E line, 45 ft. from S line of Blk. 7, Sur. No. 457 ..... Rigged up.
C. P. Scott's No. 1 J. W. Kidd, 990 ft. from N and E lines of SE of Sur. No. 56 ..... Rigging up.
Smith & Capps' No. 1 Peters, 330 ft. from S line, 340 ft. from W line of NE of Sur. No. 173 ..... Rigging up.
Sun Oil Co.'s No. 1 Duval County Ranch Co., 1,650 ft. to N and W lines of Sur. No. 78, or 330 ft. to S and W lines of E half of NW of Sur. No. 76 ..... T.D. 2,350 ft.; drlg.
G.R.C. Oil Co.'s No. 1 Duval County Ranch Co., 150 ft. from N line, 4,200 ft. from W line of Sur. 192 ..... T.D. 1,300 ft.; drlg.

FRIO COUNTY

Amerada Pet. Corp.'s No. 1 Halff & Oppenheimer, 1,300 ft. from N line, 300 ft. from E line of W. F. Haisel Sur. ..... T.D. 4,735 ft.; hole cleaned.

GILLESPIE COUNTY

Rod Lagra's No. 1 Stephen, 500 ft. from N and W lines of A.B.&M. Sur. No. 949 ..... Spudded in.

GUADALUPE COUNTY

B. E. Brock's No. 1 Ogletree, 1,600 ft. from W line, 450 ft. from S line of tract in Robert Smith Sur. ..... T.D. 1,890 ft.; standing.
Keene & Russell's No. 1 Lowman, 300 ft. from E line, 350 ft. from N line of tract in George Allen Sur. .... T.D. 380 ft.; standing.
W. A. Scrutchin's No. 1 S. J. Lowman, 170 ft. from N line, 195 ft. from W line of 10-ac. tract, in Blk. 1, Sec. No. 1 of S. J. Barnes Sur. ..... Derrick.
H. A. Suttie's No. 2 Haim, 525 ft. due S of No. 1 Haim in Jos. Kent Sur. ..... T.D. 1,670 ft.; drlg.
J. T. Stover's No. 1 Paul Hoffman, 1 mile SW of Selmar Pool ..... T.D. 2,108 ft.; standing.
F. W. Tong's No. 1 Henry Raba, 650 ft. to SW lines, 1,200 ft. to NW lines, Moses Baker Sur. ..... T.D. 750 ft.; drlg.
Walton et al's No. 1 Dan Darling in Ben Fuchs Sur. ..... Set surface csg. stadg.

GOLIAD COUNTY

Hoffman & Gooch's No. 1 Fromme, 600 ft. from N and 1,300 ft. from W line of Peter B. Dexter Sur. ..... T.D. 2,470 ft.; standing.

GONZALES COUNTY

Antibus et al's No. 1 James, 6,350 ft. from N line, 1,300 ft. from E line of Mary A. Williams Sur. ..... T.D. 1,247 ft.; coring.
Edmiston & Kirby Pet. Co.'s No. 1 J. W. Ward, Jr., 300 ft. from N line, 833 ft. from W line of tract in Dan McKay Sur. ..... T.D. 1,592 ft.; standing.
Dave Watson, trustee's No. 1 Cardwell, Byrd Lockhart Sur., 7 miles S Gonzales ..... Moving in tools.

HIDALGO COUNTY

Barrett-Kanellos' No. 1 J. B. Brock, 7 miles W and N from Mission (on Monte Cristo road) ..... T.D. 4,590 ft. S.D.
Palm City Pet. Co.'s No. 1 J. T. Lomax, 7,500 ft. from S and E lines of San Roman Sur. ..... T.D. 1,445 ft.; drlg.
Dayle L. Smith's No. 3 Dasham, SW part of county ..... T.D. 1,726 ft.; S.D.

JIM HOGG COUNTY

Clark & Cowden's No. 1 W. Allen, 150 ft. to N and W lines of Sur. 49 ..... T.D. 2,395 ft.; in sand.
Cole Pet. Co.'s No. 1 W. Allen, 990 ft. to E line, 1,320 ft. to N line of Blk. 13, Randado grant ..... Spudded in.
D. C. DeWitt's No. 1 Gomez, 1,110 ft. from N line, 150 ft. from W line of Sur. No. 12, SW part of county ..... T.D. 2,365 ft.; drlg.

JIM WELLS COUNTY

Humble Oil & Ref. Co.'s No. 1 Fuhrkin, 1,117 ft. from N line, 450 ft. from W line of 150.77-ac. tract in Phillips Sacks Sur. ..... Rigging up.
F. A. Lain's No. 1 Vernon Porter, 300 ft. from S line, 400 ft. from W line of 200-ac. tract in Sur. 25 ..... T.D. 3,172 ft.; in sand.

KARNES COUNTY

A. E. Edmiston's No. 1 G. W. Cross, 500 ft. from E line, 150 ft. from N line of tract in M. N. Reed Sur. ..... Moving in rig.
H. J. Porter et al's No. 1 Ingram, 275-ac., 1,500 ft. from E line, 300 ft. from S line of tract in Carolos Martines Sur. ..... T.D. 2,030 ft.; drlg.
Tippett & Mull's No. 1 Smith, 8,500 ft. from N line, 200 ft. from E line of Francis Haskins Sur., 2½ miles E of Helena ..... Rigging up.

KERR COUNTY

Evans & Gant's No. 1 Estelle Young, 150 ft. out of NW cor. of Sec. 28, E. A. Burge Sur. ..... T.D. 1,310 ft.; standing.
Evans et al's No. 1 Jeff Love, 150 ft. to S and E lines of C.C.S.D.&R.G.N.G. Sur. No. 1,595 ..... Rigging up.
Van Duyn & Moore's No. 1 Nowlin, 2,000 ft. from E line, 2,200 ft. from N line of James R. Bettner Sur. .. T.D. 300 ft.; drlg.
Verde Oil & Gas Co.'s No. 1 J. D. Witt, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 1,923 in Hamilton Sur. ..... T.D. 118 ft.; standing.

KLEBERG COUNTY

Harris et al's No. 1 Dennett, 600 ft. from S line, 760 ft. from E line of Blk. 7, Sec. 35, Kleberg Town & Imp. Co. Subd. ..... T.D. 160 ft.; standing.

H. Carter's No. 1 R. H. Simmons, 150 ft. from S and W lines of tract in Sec. 7, King Sur. No. 3 ..... T.D. 3,205 ft.; standing.

LA SALLE COUNTY

Interstate Oil Industries, Inc.'s No. 1 J. F. Mayes, 600 ft. from S and W lines of Blk. 20, L&G.N. Sur. No. 19 ..... T.D. 2,825 ft.; drlg.

LIVE OAK COUNTY

J. A. Harper's No. 1 fee, 2,130 ft. to N line, 510 ft. to E line of farm, J. Pointevant Sur. 37 ..... T.D. 1,100 ft.; waiting for csg.
C. J. Webster Oil & Gas Co.'s No. 1 O. F. Akers, 300-ac. tract in T. Henry Sur. ..... T.D. 100 ft.; standing.

LEE COUNTY

Paton Bros.' No. 2 Turner, 150 ft. due SE of No. 1-A Turner, junked at 5,675 ft. in the David Hudson Sur., 2 miles SE from Tanglewood ..... Location.

MAVERICK COUNTY

Kivagi Oil Co.'s No. 1, 2½ miles N of Eagle Pass ..... Location.

McMULLEN COUNTY

Jaqua & Crow's No. 1 Hagist, 330 ft. from N and W lines of R. W. Mills Sur. No. 467 ..... Spudded in.
C. C. Shumway's No. 1 Shiner, 400 ft. from W line, 200 ft. from N line of Blk. 45 of Shumway Subd. of Shiner ranch ..... T.D. 200 ft.; drlg.
Skinner & Bailey's No. 1 Burmeister in SW cor. of Sec. 14, Blk. 1, C.H.&H. Ry. Sur. ..... T.D. 820 ft.; S.D.

MEDINA COUNTY

James E. Greenlea's No. 1 Feasler, 600 ft. from N line and 2,400 ft. from E line of L. G. Harrison Sur. No. 799 ..... T.D. 1,230 ft.; set csg.
F. Ryal's No. 1 G. Martin, 150 ft. from S and W lines of Blk. 368, H. Castro Sur. ..... Spudded in and S.D.
W. L. Umburn's No. 4 Jungman, 150 ft. from N line, 450 ft. from E line of tract in N. B. Rogers Sur., No. 33 ..... T.D. 816 ft.; set csg.

MILAM COUNTY

Bridwell's No. 1 Terry, 1,100 ft. from N line, 800 ft. from W line of tract in Jose Leal Sur. ..... T.D. 2,370 ft.; S.D.
Ed Clark's No. 1 Pritchard, 1,100 ft. to SE lines, 700 ft. to NE lines of 163-ac. tract in F. Ernst Sur., 6½ miles NE Thorndale ..... Rigged up.
Glass et al's No. 1 Ellison, 700 ft. from N line, 1,350 ft. from W line of 200-ac. tract in Samuel Frost Sur. ... T.D. 1,665 ft.; S.D.
Michalk & Clark's No. 1 Johnson, 60 ft. S of No. 1 Johnson on 100-ac. lease in Juan Jose Acosta Sur. ..... T.D. 2,216 ft.; flowing sulphur water.

NUECES COUNTY

Gulf Port Oil Co.'s No. 1 Luby, 2,044 ft. from E line, 2,142 ft. from S line of John M. Luby, 631.74 acres, Blk. 1 of Mary J. Luby Share 1-G of Anna Collins Petronilla pasture, 24 miles SW from Corpus Christi .. T.D. 4,750 ft.; drlg.
Miller et al's No. 1 Harney, 200 ft. from NW line, 1,850 ft. from SW line of 445-ac. tract in Gregoria Farias Sur. ..... Moving in tools.
George Noble's No. 1 Homeland Syndicate, 300 ft. to SE and SW lines of Blk. 8, Sec. 12, 5 miles S Corpus Christi ..... Location.

SAN PATRICIO COUNTY

Chiltipin Oil & Gas Co.'s No. 1 E. H. Welder, 1,750 ft. from N line, 660 ft. from W line of tract in Blk. 5, Portilloo Sur. ..... T.D. 5,270 ft.; drlg.

STARR COUNTY

Adams & Modest's No. 1 Wood, 2,070 ft. from W line of Porcion 84, Camargo, and 1,472 ft. N of Missouri Pacific Railroad ..... Spudded in.
W. P. Chancellor's No. 1 A. Guerra, 26,000 ft. from S line, 2,600 ft. from E line of Share 6, of San Jose grant ..... T.D. 500 ft.; drlg.
Hartshorn et al's No. 1 Hinijosa, 835 ft. W of Hebbronville road and 2,500 ft. from S line of Porcion 110 .... Location.
B.&B. Oil Co.'s No. 1 Crown Brick & Tile Co., 1,800 ft. S of State Highway No. 4 and 580 ft. from W line of Porcion 87, near La Puerta ..... T.D. 2,400 ft.; drlg.
D. H. Carpenter's No. 1 Salinas, 3,087 ft. from N line, 1,321 ft. from E line of Share 35 of partition of Porcions 38, 39, 40 in Jurisdiction of Reynosa ..... T.D. 2,100 ft.; drlg.
Coastal O. & G. Co.'s No. 1 Kelsey Bass, 448 ft. to N line, 150 ft. to W line of Tract 52, Sur. 2, Porcion 86 .. T.D. 1,860 ft.; changing to heavier rig.
W. T. Gilman & Travelers Oil Co.'s No. 1 C. Ramos, 1,170 ft. from SW line, 1,470 ft. from NW lines of Sur. No. 150 ..... Spudded in and S.D.
Great Plains Oil Co.'s No. 1 Sanchez, 660 ft. from W line, 330 ft. from S line of SE of NW of Sur. No. 344 ..... Rigging up.
H. C. Harter's No. 1 Gonzales, 990 ft. from N line, 1,150 ft. from E line of Share 62-B of Subd. of Porcions 70 and 71, Jurisdiction of Mier ..... T.D. 434 ft.; abnd.
Jeffries and Lambeth Drilling Co.'s No. 1 Starr County Cattle Co., 11,572 ft. from N line, 2,490 ft. from E line of Porcion 89, Jurisdiction of Camargo ..... T.D. 1,100 ft.; drlg.
Boyd C. Jones' No. 1 Garza, 2,407 ft. from N and E lines of Share 26, Part. of Porcions 67-72, Jurisdiction of Mier ..... Rigging up.
LaJoya Oil & Gas Co., in Porcion 29, NE part of county .. Location.
A. C. McGahhey's No. 1 Fernandes Bros., 1,800 ft. from W line, three-quarters of a mile from Rio Grande River, in Porcion 99, Jurisdiction of Camargo ..... Location.
D. A. Miller's No. 1 Madrigal, 4,827 ft. to N line, 1,987 ft. to E line of Share 15, Porcions 67, 72, 1 mile NE of Roma ..... T.D. 105 ft.; drlg.
John Pope, trustee's No. 2 H. Gonzales, 150 ft. W of cen. of E line of Sur. No. 339 ..... Spudded in.
J. W. Seaward's No. 1 F. Dawson, 495 ft. from W line, 240 ft. from S line of tract in Blk. 6, Share 3-B of Porcion No. 70 ..... Location.
George Stobaugh's No. 1 Seabury et al, 150 ft. from S and W lines of Porcion 107 ..... T.D. 278 ft.; no report.

TRAVIS COUNTY

E. A. Field's No. 1 B. H. Bloor, 150 ft. from S line, 500 ft. from W line of 400-ac. tract in NE part of county .. T.D. 1,003 ft.; drlg.
Franklin et al's No. 1 Reimer, 1,200 ft. from SE line, 1,400 ft. from most southerly SW line of Sur. 35 .. Spudded in.
Fritz Fuch's No. 1 Swedish, 2,350 ft. from NE line, 750 ft. from NW line of Thomas Smith Sur. ..... T.D. 2,005 ft.; S.D.

UVALDE COUNTY

J. V. Scoggin's No. 1 Olive Henry, 1,100 ft. from N and E lines of tract in Hugh Kilgore Sur. ..... T.D. 510 ft.; drlg.

WEBB COUNTY

J. W. Edwards' No. 1 M. D. Slator, 1,320 ft. to NE and NW lines of Blk. 72, Slator Subd. of J. V. Borrego grant ..... T.D. 200 ft.; drlg.

WILLIAMSON COUNTY

McLean et al's No. 2 R. C. Miller, 800 ft. to S line, 100 ft. to W line of tract in B. Manlove Sur. ..... T.D. 1,130 ft.; S.D.

ZAPATA COUNTY

Donohoo et al's No. 1-A Garcia, 150 ft. from NE and SE lines of Blk. 7 of Subd. of 700-ac. of Share A, Charco Redondo grant ..... T.D. 1,085 ft.; standing.
Huff & Fudge's No. 1 Uribe, 150 ft. from NW and SW lines of Blk. 3, Share 7, Partition 6, San Ignacio Subd. of Borrego grant ..... T.D. 725 ft.; coring.
Phelps, Taegel & Leyendecker's No. 1 Martinez, 150 ft. to N and W lines of Blk. 15 of S. T. Phelps, Jr. Subd. "A" of Villa grant ..... Drlg.
H. L. Sargent et al's No. 1 Antonio Gutierrez heirs, 932 ft. from W line, 472 ft. from S line of Tract 2, Blk. 5, Nixon Subd., Porcion 10, San Ignacio Borrego grant ..... T.D. 1,485 ft.; drlg.
Winch & Billings' No. 1 S. Benavides, 1,018 ft. from NW line, 1,107 ft. from NE line of Blk. 2 of O'Hern & Fansler Subd. of Villa grant ..... T.D. 1,673 ft.; comp. 1,500,000 ft. gas, 630 pounds.

J. W. Brower's No. 1 Uribe, 150 ft. from NW and SW lines of Blk. 8, Share 7, Partition 6 of San Ignacio Subd. of Borrego grant ..... T.D. 712 ft.; testing sand.

ZAVALA COUNTY

Adair & Daniel's No. 1 Gates, 1,320 ft. from N line, 1,320 ft. from E line of Hooper & Wade Sur. No 13.. T.D. 3,215 ft.; resuming drlg.

Southwest Texas Proven Areas

Week Ending November 19

NORMANNA POOL—BEE COUNTY

Company, well, farm name, section and block— Remarks:

Gulf Coast Oil Co.'s No. 5 Hicks, 600 ft. E of Nichols Oil Co.'s No. 2 Hicks ..... T.D. 3,515 ft.; drlg.

PETTUS FIELD—BEE COUNTY

J. L. Mauldin's No. 2 fee, 945 ft. to S line, 150 ft. to W line of farm, George A. Kerr Sur. ..... T.D. 3,880 ft.; set csg.

United Prod. Co.'s No. 44 Ray, south offset to Gulf Coast Oil Co.'s No. 3 McKinney ..... T.D. 3,681 ft.; drlg. in.

TULETA POOL—BEE COUNTY

Dirks Bros.' No. 1 fee, 165 ft. to S and E lines, Sec. 3, Ragsley Subd., Uranga grant ..... T.D. 4,302 ft.; set csg.

Taber et al's No. 1 Harris, 150 ft. from N and W lines of Blk. 13, Sec. 13, Ragsley Subd. of Uranga grant .. Spudded in.

The Texas Company's No. 2 Cox, 250 ft. from S and W lines of SE of SW of SW of Sec. 2, Ragsley Subd. of Uranga tract ..... Location.

Wallace and Bowles' No. 1 Harris, 150 ft. from N line, 250 ft. from E line of Lot 12, Sec. 13 of Ragsley's Subd. of Uranga grant ..... Set surface csg.

GAS RIDGE—BEXAR COUNTY

American Gas Co.'s No. 5 W. H. Kennon, 1,750 ft. from S line, 2,000 ft. from E line of 400-acre tract in Maria F. Rodrigues Sur. ..... T.D. 2,230 ft.; standing.

ECKERT POOL—BEXAR COUNTY

Alamo Nat. Gas Co.'s No. 3 J. H. Gembler, 180 ft. from N and E lines of tract in A. Manachaca Sur. 51. T.D. 1,216 ft.; standing.

E. M. Carl's No. 1 F. Gembler, 140 ft. from N line, 750 ft. from E line of tract in J. Montes Sur. ..... T.D. 825 ft.; standing.

F. H. Eckert & Son's No. 2 Boehner, 800 ft. from N line, 210 ft. from E line of 93-ac. tract in Bequar Sur. ..... Location.

Gatlin Oil Co.'s No. 15 I. A. Beck, 150 ft. from S and E lines of tract in J. Montes Sur. ..... Location.

Johnson Bros.' No. 1 Elsie Janszen, 150 ft. from SW line, 4,000 ft. from SE line of 139-ac. tract in J. Montes Sur. ..... T.D. 300 ft.; drlg.

W. R. Swearingen's No. 11 Halbardier, 400 ft. SE of No. 10 Halbardier, J. F. Perez Sur. ..... Location.

DUNLAP POOL—CALDWELL COUNTY

Bob Rose's No. 2-B Walker 46-ac. tract, 360 ft. from NW line, 500 ft. from SW line of tract in Solomon Seal Sur. ..... T.D. 2,255 ft.; standing.

SALT FLATS—CALDWELL COUNTY

Hickman et al's No. 1 C. A. Dickerson, 150 ft. N of cen. of S line of tract in John D. Rains Sur. ..... T.D. 2,172 ft.; standing.

NORTH GOVERNMENT WELLS—DUVAL COUNTY

R. B. Byrd's No. 3 Wright, 660 ft. from W line, 330 ft. from N line of Sur. No. 101 ..... Location.

H. H. Coffield's No. 4 Wendt, 330 ft. from N line, 810 ft. from E line of SE of NE of Sur. No. 43 ..... Comp. 35 bbls. hourly.

W. T. Daniels' No. 1 F. J. Smith, 200 ft. from N and W lines of SW of NE of Sur. No. 46 ..... Location.

Hamill & Hamill No. 4 Hahl, 990 ft. from W line, 330 ft. from N line of N half of SE of Sur. No. 42 ..... T.D. 2,282 ft.; comp. 30 bbls. hr.

Highland Oil Co.'s No. 3 Lundvall, 330 ft. to N and W lines of S half of NE of Sur. 42 ..... T.D. 2,230 ft.; coring.

Magnolia Pet. Co.'s No. 2 A. A. Brodbeck, 330 ft. to S and W lines of W half of NW of NE of Sur. 44 .... T.D. 2,294 ft.; set csg.

Magnolia Pet. Co.'s No. 2 Bryan White, 330 ft. from N and E lines of NE of NE of Sur. No. 44..... T.D. 2,300 ft.; comp. 85 bbls. daily on pump.

C. G. Porter's No. 1 J. T. Smith, 200 ft. from N and W lines of NW of NE of Sur. No. 46 ..... T.D. 2,300 ft.; comp. 100 bbls. per day on pump.

San Diego Oil Corp.'s No. 5 E. Riley, 330 ft. from S and W lines of NW NW of Sur. No. 46 ..... Location.

San Diego Oil Corp.'s No. 2 L. Bennett, 600 ft. N of No. 1, 250 ft. to W line of SE SW of Sur. No. 44... Spudded in.

San Diego Oil Corp.'s No. 4 E. Riley, 230 ft. from N line, 550 ft. from W line of NW NW of Sur. No. 46.. Rigging up.

Southwest Drlg. Co.'s No. 4 R. Wendt, 330 ft. from N and E lines of SE SE of Sur. No. 43 ..... Location.

Southwest Drlg. Co.'s No. 6 Wendt, 330 ft. from S and E lines of NE of SE of Sur. No. 43 ..... T.D. 2,302 ft.; set csg.

The Texas Co.'s No. 1 C. W. Freer, 150 ft. from S and E lines of SE NE of Sur. No. 45 ..... Location.

Whisenant, Trenchard and French Oil Co.'s No. 3 Hahl, 620 ft. from S line, 250 ft. from E line of SW of SW of Sur. No. 44 ..... Set csg. 2,312 ft.

SOUTH GOVERNMENT WELLS FIELD—DUVAL COUNTY

Humble Oil & Refining Co.'s No. 8 Paul White, 1,650 ft. to W line, 4,290 ft. to S line, Sur. 58 ..... T.D. 2,300 ft.; comp. 500 bbls. day.

Humble Oil & Refining Co.'s No. 9 Paul White, 1,320 ft. to W line, 4,950 ft. to S line, Sur. 58 ..... Location.

The Texas Co.'s No. 5 Bishop Cattle Co., 1,750 ft. from W line, 1,020 ft. from S line of Sur. 135 ..... T.D. 2,380 ft.; comp. 200 bbls. day.

SARNOSA FIELD—DUVAL COUNTY

La Jita Oil Co.'s (Camp) No. 2 Weil, 1,591 ft. from SW line, 200 ft. from NW line of S half of Sur. 566..... T.D. 2,641 ft.; abnd

Sarnosa Oil Corp.'s No. 2 Weil, 120 ft. SE and 660 ft. NE of No. 2 in Sur. No. 130 ..... T.D. 2,374 ft.; drlg. in.

Sarnosa Oil Corp.'s No. 4 Weil, 330 ft. NW and 660 ft. NE of No. 3 in Sur. No. 130 ..... Location.

Smith & Capps' No. 4 Duval County Ranch Co., Sur. 576.. T.D. 2,340 ft.; set csg., waiting on cement.

San Oil Co.'s No. 2 Cuellar (Cano), 150 ft. from SW and SE lines of E quarter of Sur. No. 576..... Rigged up.

DARST CREEK POOL—GUADALUPE COUNTY

The Texas Co.'s No. 2 A. E. Dowdy, 660 ft. from W line, 400 ft. from S line of tract in Jacob Darst Sur.. T.D. 2,567 ft.; comp. 200 bbls. dly. on pump.

SAL-MAR FIELD—GUADALUPE COUNTY

Sal-Mar Oil & Gas Co.'s No. 1 Hempel, 1,600 ft. from S line, 150 ft. from E line of tract in G. W. Williams Sur. ..... T.D. 2,318 ft.; standing.

A. W. Wormser's No. 1 Harris, 150 ft. from N line of tract and 150 ft. E of creek in Green Dewitt Sur..... Derrick.

HORD'S CREEK—GOLIAD COUNTY

Sam Vanderweiss' No. 1 Kaufman, 2,700 ft. NE of NE line of B. Merrill Sur., 300 ft. NW of NW line of Vincente Ramos Sur. ..... Location.

ALWORTH FIELD—JIM HOGG COUNTY

H. C. Cate's No. 1 B. J. Leyendecker, 70 ft. to E line, 320 ft. to S line, Blk. 10, Sur. 142 ..... T.D. 680 ft.; drlg.

SANDIA POOL—JIM WELLS COUNTY

Crude Oil Royalty Co.'s No. 1 Allen (first carried as Hughes & Long's No. 1 Wade), Cen. Blk. 2, Wade ranch ..... Spudded in; changing rigs.

Larero Gas & Pet. Co.'s No. 3 Wade, 2,000 ft. S, 33 deg. W of No. 2 Wade, thence 1,970 ft. N, 57 deg. W.... Material on ground.

JACOB POOL—McMULLEN COUNTY

Jacob, Buzzini & Pickett's No. 8-A Jacob, 660 ft. N of No. 2-A Jacob ..... T.D. 967 ft.; drlg. in.

Jacob, Buzzini & Pickett's No. 9-A Jacob, 3,030 ft. from SW line, 843 ft. from SE line of Crowther Sur. No. 8. T.D. 953 ft.; comp. 60 bbls. daily.

Jacob, Buzzini & Pickett's No. 10-A Jacob 2,540 ft. S of No. 2-A and 843 ft. from E line of Sur. No. 8 .... Location.

F. B. Lefevre's No. 1 Leonard Jacob, 3,107 ft. S, 51 deg. W of E cor. and 1,697 ft. N, 39 deg. W, of SE line of W. D. Benham Sur. ..... T.D. 1,205 ft.; abnd.

WENTZ POOL—McMULLEN COUNTY

V. G. Schimmel's No. 1 Wolfe, 400 ft. from E line, 360 ft. from N line of Sur. 65 ..... T.D. 1,000 ft; drlg. showing gas.

ADAMS FIELD—MEDINA COUNTY

Vantis Oil Co.'s No. 1-A Adams, 50 ft. from No. 1 ..... T.D. 200 ft.; drlg.

SAXET FIELD—NUECES COUNTY

Capps and Smith's No. 1 Hutchins, 330 ft. from S and E lines of 80-ac. tract in George Frank Sur. No. 416.. Moving in machinery.

Houston Oil Co.'s No. 1 Walton, 170 ft. from N line, 220 ft. from E line of 500-ac. tract ..... T.D. 4,800 ft.; drlg.

Gibson Oil Co.'s No. 1 Ran Morgan, 330 ft. from S and E lines of E 80 acres of Ran Morgan's 320 acres in B.S.&F. Sur. No. 405 ..... T.D. 3,734 ft.; drlg.

Gulf Coast Oil Co.'s No. 2 Bessie Elder, 300 ft. to S and E lines of Lot 29, Shepard Subd. of John Dunn Sur. No. 312 ..... T.D. 4,564 ft. set csg.

Gulf Port Oil Co.'s No. 1 Isencee, 330 ft. to N and W lines of 306-ac. tract in C. Land Sur. ..... Location.

Gulf Port Oil Co.'s No. 3 Frank Bliss, 1,699 ft. to N line, 350 ft. to E line of 235-ac. tract in J. W. Stevens Sur. No. 406 ..... Location.

Gulf Port Oil Co.'s No. 2 Isencee, 330 ft. from N and E lines of 235-ac. tract in Charles Land Sur. No. 404. Spudded in.

Saxet Oil Co.'s No. 9 Dunn, 180 ft. from N line, 164 ft. from W line of lease, south offset to Oso Drillers' No. 2 Roark ..... T.D. 4,034 ft.; coring sand.

O. R. Seagraves' No. 1 Lagasse, 330 ft. from N and W lines of Blk. 22, of H. B. Shepherd farm lots..... T.D. 3,016 ft.; drlg.

Titus & Calloway's No. 1 Lagasse, 2,200 ft. from N line, 2,400 ft. from E line of J. M. Stevens Sur. No. 406... T.D. 4,080 ft.; in sand.

Titus & Calloway's No. 2 Lagasse, 950 ft. from N line, 400 ft. from E line of J. M. Stevens Sur. No. 406.... T.D. 4,060 ft.; drlg.

Titus & Calloway's No. 3 Lagasse, 330 ft. from N and W lines of E half of Blk. 25 of Shepherd farm lots.. Derrick.

Titus & Calloway's No. 1 Hutchins, 500 ft. from N line, 1,500 ft. from W line of Blk. 19, Shepherd farm lots.. T.D. 3,025 ft.; drlg.

Titus & Calloway's No. 1 Ran Morgan, 330 ft. from N and E lines of W 80 acres of E 160 acres of N half of 423 acres of B.S.&F. Sur. No. 403 ..... Derrick.

LOS OLMOS POOL—STARR COUNTY

Austin et al's No. 1 Kelsey Bass, 150 ft. to N and W lines of NW of NW of Sur. 4, Porcions 75, 76, 77, Jurisdiction of Camargo ..... Rigging up.

V. V. Combs' No. 1 Kelsey Bass, 150 ft. from N and W lines of NE NE of Sec. 6, Porcions 75, 76 and 77.... Location.

Goodwin & Yantis' No. 1 Kelsey Bass, 150 ft. to S and E lines of SE of NW of Sur. 3, Porcions 75, 76, 77.... Location.

J. E. Harper & Co.'s No. 1 E. Salinas, 150 ft. to S and E lines of 40-ac. tract in Share 16, Por. 75 ..... T.D. 100 ft.; standing.

Hornaday-Porter's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW NE Sec. 7 of Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 458 ft.; set csg.

Keck & Keane's No. 1 Kelsey Bass, 150 ft. from E line, 300 ft. from N line of W 10 acres of SE NW Sec. 6, Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo.. T.D. 336 ft.; comp. 2,000,000 ft. of gas.

Keck & Keane's No. 2 Kelsey Bass, 150 ft. from N and W lines of NE NE Sec. 6 of Subd. of Porcions 75, 76, 77, Jurisdiction of Camargo ..... Location.

Los Olmos Oil & Gas Co.'s No. 30 Kelsey Bass, Sec. 7, Subd. of Porcions 75, 76, 77, Camargo ..... T.D. 448 ft.; comp. 40 bbls. daily.

Los Olmos Oil & Gas Co.'s No. 31 Kelsey Bass, Sec. 7, Subd. of Porcions 75, 76, 77, Camargo ..... T.D. 440 ft.; comp. 50 bbls. daily.

Los Olmos Oil & Gas Co.'s No. 32 Kelsey Bass, Sec. 7, Subd. of Porcions 75, 76, 77, Camargo ..... T.D. 451 ft.; comp. 50 bbls. daily.

R. A. Mitchell's No. 1 Kelsey Bass, 150 ft. from S and W lines of NW SE of Sur. 8, Subd. Porcions 75, 76, 77, Jurisdiction of Camargo ..... T.D. 212 ft.; drlg.

J. P. Moore and C. B. Van Matre's No. 1 Seabury et al, 150 ft. from E line, 750 ft. from S line of Share 5, Subd. of W part of Porcion 75 ..... T.D. 305 ft.; drlg.

Munday Bros.' No. 1 Seabury, 840 ft. from E line, 4,550 ft. from S line of Share 5, Subd. of W two-thirds of Porcion 75, Jurisdiction of Camargo ..... Rigging up.

C. L. Sinclair's No. 2 Kelsey Bass, 150 ft. to S line, 1,050 ft. to W line of SW of SW of Sur. 5, Porcions 75, 76, 77 ..... Location.

Tarver & Nance's No. 7 Kelsey Bass, 150 ft. from N and W lines of SW of SE of Sur. 7, Porcions 75, 76 and 77 ..... T.D. 250 ft.; drlg.

Tollen, Floyd & Warner's No. 1 Seabury, 450 ft. from S line, 814 ft. from E line of 80-ac. tract in Share 5, W part of Porcion 75 ..... T.D. 389 ft.; set csg.

RIO GRANDE CITY POOL—STARR COUNTY

Mundy and others' No. 1 Salinas, 190 ft. to S and W lines of Blk. 12, Share C-38, Porcions 80 and 81, Camargo ..... T.D. 1,460 ft.; drlg.

Meyers and McCaghren's No. 2 Frank Doyno, 796 ft. from S line, 720 ft. from W line of Blk. 4, Share 77-A, Subd. of Porcions 80 and 81, Jurisdiction of Camargo ..... Location abnd.

Sioux Oil Corp.'s No. 1 Doyno, 478 ft. from W line, 559 ft. from S line of Blk. 4, Share 77-A of Porcions 79, 80, 81, Camargo ..... Location.

S. S. Smith's No. 1 O'Meara in Share 76 in W half of Porcion 79, Jurisdiction of Camargo ..... T.D. 1,650 ft.; abnd.

LAUREL POOL—WEBB COUNTY

Hamill & Hamill's No. 1 Sarah Lloyd et al, 150 ft. from S and E lines of SE of SW of Sur. No. 23 ..... T.D. 2,210 ft.; took 4 ft. saturated core.

Montex Oil Co.'s No. 1 M. Vela, 479 ft. from N line, 490 ft. from W line of Blk. 4, Sur. No. 267 ..... T.D. 1,832 ft.; comp. 25,000,000 ft. gas, 500 pounds.

Montex Oil Co.'s No. 1 B. Rosenberg, 150 ft. to S and W lines of Blk. 5, Sur. 271 ..... T.D. 2,240 ft.; set csg.

Newton Drilling Co.'s No. 1 A. Garcia, 2,550 ft. from S line, 2,340 ft. from W line of Sur. No. 52, 2 miles SW of Carolina Texas Field ..... T.D. 2,080 ft.; drlg., shows oil.

Sal-Mar Oil Corp.'s No. 1 Vela, 660 ft. from NW and SW lines of Blk. 16, Sur. No. 1,011 ..... Location.

South Texas Oil Co.'s No. 2 State of Texas, 644 ft. from N line, 150 ft. from W line of Blk. 10, Sur. No. 270.. T.D. 2,240 ft.; set csg.

South Texas Oil Co.'s No. 3 State of Texas (Laurel), 450 ft. from W line, 374 ft. from N line, Blk. 10, Sur. No. 270 ..... Location.

CAROLINA-TEXAS POOL—WEBB COUNTY

Foster Barnsley's No. 2-F Webster, 165 ft. from N and E lines of SE of NW of Sur. No. 684 ..... T.D. 2,588 ft.; rigging up to deepen.

SCHOTT POOL—WEBB COUNTY

O. W. Killam's No. 1 W. Breckenridge, on line between Blks. 9 and 11 and 650 ft. from E line of Blks. 9 and 11 in Sur. No. 771 ..... Spudded in.

ESCOBAS POOL—ZAPATA COUNTY

Allied Oil & Gas Co.'s No. 12 Gutierrez, 2,662 ft. from SE lines, 750 ft. from NE lines of Share 4, Comitas grant ..... T.D. 100 ft.; standing.

F. M. Blair & Son's No. 1 Montemayor, 450 ft. from N line, 150 ft. from E line of Blk. 1, Sur. 63 ..... T.D. 1,723 ft.; abnd.

John Ward's No. 1 M. Garza estate, 150 ft. from NW and NE lines of Blk. 31, Douglas Subd. of Zorro ranch, Comitas grant ..... Location.

The Texas Co.'s No. 15 Measles, 18,862 ft. from SW line 2,948 ft. from SE line of Cerrito Blanco grant ..... Spudded in.

MARTINEZ POOL—ZAPATA COUNTY

H. Muckelroy, Jr.'s No. 1 A. Trevino, 150 ft. from S and E lines of Blk. 16, Sur. No. 411 ..... T.D. 2,270 ft.; drlg.

MIRANDO VALLEY POOL—ZAPATA COUNTY

Newton et al's No. 1 Flores, Sur. 249 ..... T.D. 500 ft.; drlg.

TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the questions is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Gauge for Reid Vapor Pressure Test Is a Standard Gauge

Concerning your discussion of "Vapor Pressure and Altitude" in your issue of October 6, it appears that in the second paragraph you have confused the conditions of the test with the gauge. It is my understanding that this gauge is not adjusted to indicate absolute pressure. Isn't that true?—C. R. N.

The statement that was made indicating that the gauge used is a special instrument is not correct. This is clearly indicated by the description given in the method for making the vapor pressure test. A.S.T.M. Designation: D 323-31 T. The third section, under Apparatus, states: "The pressure gauge shall be a standard Bourdon type spring gauge 4½ to 5½ inches in diameter. The range of the gauge used shall be governed by the vapor pressure of the sample being tested, as follows: For those samples with a vapor pressure not in excess of 12 pounds per square inch absolute at 100° F. the gauge shall have a 15-pound scale. For those samples whose vapor pressures are between 12 and 45 pounds, the upper limit of the gauge shall not be less than 45 nor more than 60 pounds."

Under the conditions of test the larger chamber of the instrument, the air chamber, is first cleared of any vapors remaining from a prior test and with the gauge in place is attached to the gasoline chamber containing the sample to be tested. The bomb is then turned upside down, shaken vigorously and immersed up to the bottom of the gauge in a water bath at 100° F. When the gauge indicates, by consecutive readings, that the pressure is constant the indication is recorded as the "uncorrected vapor pressure." This must be corrected for the change in the pressure of the water vapor and air in the air chamber due to the differences between the "initial air temperature" and the temperature of the bath. The correction may vary from +0.6 pounds at 110° F. to —2.9 pounds at 32° F.

"Due to the fact that the atmospheric pressure provided in the air chamber counteracts the external atmospheric pressure, the only pressure acting internally on the pressure gauge is the absolute vapor pressure of the liquid in the bomb so that the gauge reading is the absolute pressure of the liquid in pounds per square inch at 100° F."

Strobophonometer for Detecting Engine or Fuel Knock

A mechanical device called a strobophonometer has been suggested for the mechanical measurement of engine knock and I would appreciate any information you can furnish concerning this instrument.—S. Y. E.

The strobophonometer is an instrument used for comparing and locating knock and other engine and machinery noises. This was described by Standfield and Carpenter in the Journal Institution Petroleum Technologists 18, 513, 1932; the material following being abstracted from this article.

This is an instrument for the analysis and measurement of sounds, such as knock, the relative intensity of the noise is indicated on a meter. A simple telephone earpiece is highly satisfactory as the microphone. When this is held in a sponge mounting against the source of sound the diaphragm is damped by the air pocket formed between the machine, the rubber and the diaphragm housing. This damping is sufficient to give the necessary frequency range, and the range may easily be changed when required.

Operation of the amplifier from any of the usual alternating current supplied is the simplest for general use. The A.C. input transformer can be coupled to operate from any voltage by adjustment of connections. The selector is driven from the machine under examination, and is provided with a direct and a two-to-one geared drive so that it can be used on four-stroke cycle engines coupled either to the camshaft or crankshaft. Two knurled nuts on the selector release the brush gear controlling the listening angle and the phasing, and allow either of these to be adjusted at will.

An illustration shows the complete apparatus for A.C. use, including the microphone, the amplifier, the output meter and control box, and the selector.

Petroleum Oils Used for Making Special Grades of Soaps

Can you give us any information covering the use of any sizable percentages of petroleum oil for the manufacture of soap?—M. M. L.

Soaps are compounds made by combining fatty acids with alkalis; the fatty acids being derived from fats and oils of either vegetable or animal origin. The petroleum oils are not of a similar structure to such fats and oils so do not combine in large quantities with alkaline substances in the same way. When it is desirable to incorporate a petroleum oil into a soap the combination must be made with the aid of other materials, especially such waxes as carnauba and beeswax.

An example of such a combination is:

Petroleum Soap

Material—	Pounds
Beeswax	4
Pure soap (Castile)	10
Petroleum	5
Alcohol	5

The petroleum oil, wax and alcohol are slowly and carefully heated over steam and stirred until solution is obtained. Then add the finely grated soap and continue the heating until the soap is in solution. Cut off the steam and stir until the mixture starts to cloud (set), then run into suitable moulds.

Crude petroleum, kerosene or naphtha may be used for making petroleum soaps. They are said to have a high rating for the destruction of certain objectionable germs and are also used in insecticidal sprays.

Difference Between Polymerization and Condensation Reactions

Will you kindly explain if there is any difference in the meaning of condensation and polymerization bodies which are said to be formed when cracking an oil?—S. P.

Condensation is said to take place when two or more molecules of a substance, either the same or different substances, combine to make a new compound, water being always formed as an additional product of the reaction. For example, three molecules of acetone, $(CH_3)_2O$, will unite to produce phorone, $C_9H_{14}O$, and water.

Polymerization is that form of a chemical change in which a new compound is formed having a molecular weight that is some multiple of the molecular weight of the original substance. The new compound being made by a direct union of two or more molecules of the first compound. The simplest example is the conversion of formaldehyde, CH_2O, to paraldehyde, $(C_2H_4O)_3$. A product of this type is called a polymer. It has the same percentage composition as the original product. No water is formed.

While it appears that there may be some condensation reactions taking place in the cracking process, the fact that no large quantity of water is produced, and the characteristics of the several products do not indicate any substances of the water type, suggest that there are no extensive condensation reactions taking place. There is more evidence of polymerization.

Highest Price Paid at Refinery for Gasoline Is 90 Cents

The statement has been made that there is a refinery located in America which is now selling gasoline at $1 a gallon. If you know this to be true will you give me the location and any other details?—L. H. R.

There is a small refinery, reported to belong to the Imperial Oil Co., at Fort Norman, Canada, having a charging capacity of about 200 bbls. a day. This plant is about 100 miles south of the Arctic Circle and west of the southern part of Great Bear Lake on the Mackenzie River, placing it the farthest north refinery. It is reported that the refinery operates during the summer months only.

The refinery gets its supply of crude oil from the two wells that have been drilled by the Imperial Oil Co. During the past summer approximately 860 bbls. were refined, yielding 10,000 gallons of gasoline and 20,000 gallons fuel oil. Some of the crude oil and these products are sold to the mining companies operating for the recovery of radium, silver and other materials in the Great Bear Lake area 300 miles west of Fort Norman; these companies laying in sufficient quantities to tide them over until the opening of navigation next spring. Before this refinery was in operation it was difficult and expensive to get any gasoline into the region and what gasoline was brought in sold at $2 a gallon, but during this season the Imperial company has sold the gasoline for 90 cents. This is the highest refinery price we know about.

The company has two producing wells in the field about 50 miles below Fort Norman. When development started about 12 years ago, the trip from Fort Norman to the wells represented 21 hours hard mushing, but the manager of the property now covers the distance in 25 minutes by plane. The two wells have an estimated potential production of 140 bbls. a day.

Abbreviations in Market Reports for Petroleum Products

Would you kindly answer what is meant under Refinery and Crude Prices by: V.M.&P. under naphtha; the C as bunker C fuel; D and E in connection with bright stocks; the 600 S.R., as Pennsylvania 600 SR.?—F. A.

V.M.&P. means varnish makers and painters, this kind of naphtha being used when making some grades of varnish and paint. Bunker fuel oil is classified into three grades, these being designated A, B and C. The most important distinguishing property of these oils is the Saybolt Furol viscosity at 77° F. or 122° F., as shown in the table.

BUNKER FUEL OILS

Grade	Temp. °F	Saybolt Furol viscosity (seconds)
A	77	100
B	122	100
C	122	300

Steam refined cylinder stocks were originally produced from paraffin base petroleums as residues obtained when reducing the crude oil in a batch still with the aid of steam. In the market list the S.R. indicates steam refined. The 600 refers to the fire test; 600° F. being the minimum fire test temperature for this class of oils. Steam refined stocks are frequently filtered.

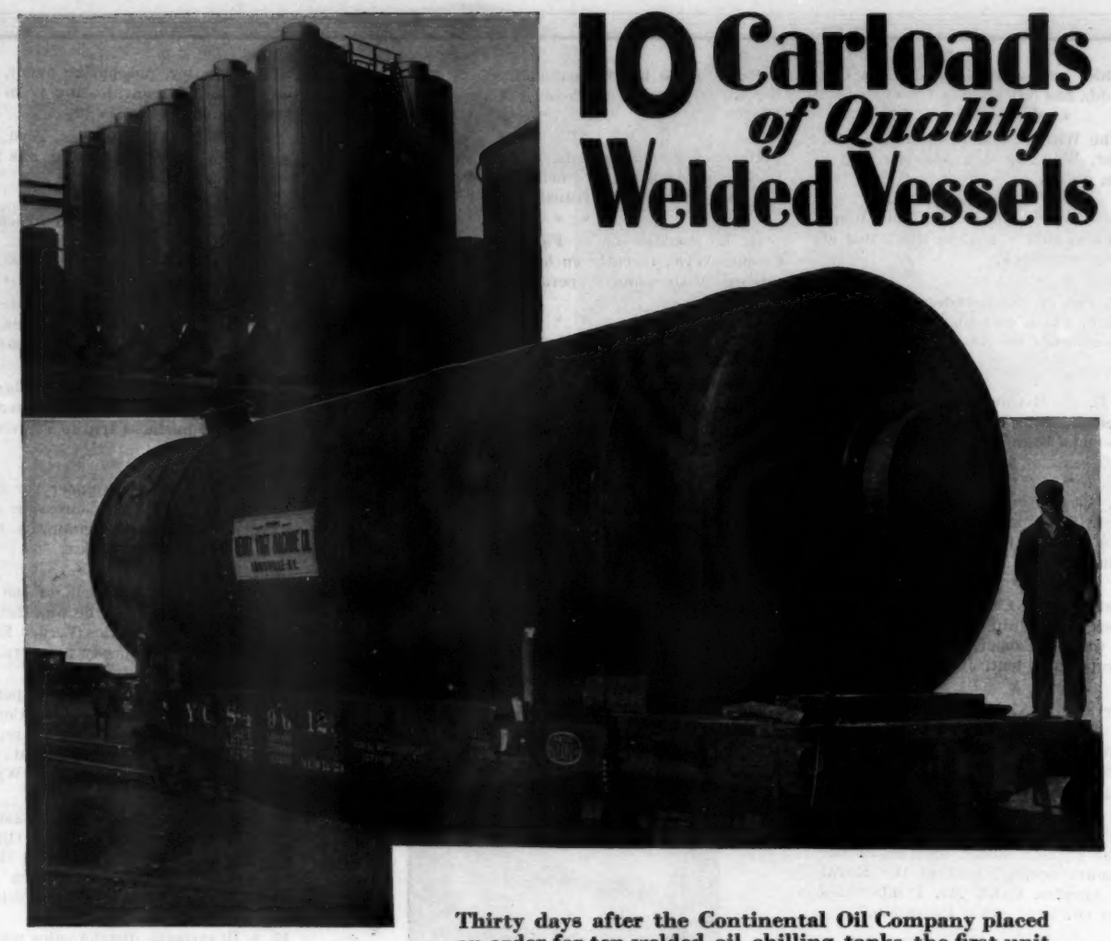
The color of lubricating oils, such as Bright Stocks and filtered cylinder oils, is indicated by the Letters A, D and E, from the color scale of the Union Colorimeter. A is the lightest color, D the medium, and E the darkest. The equivalents of these are shown in the table.

COLOR EQUIVALENTS

Union	Lovibond Red 200	Lovibond Yellow 510	Iodine solution, milligrams
A	10.2	29.0	50
D	21.0	31.0	100
E	89.0	56.0	500

The iodine solution is one containing 10 grams of iodine and 20 grams of potassium in one liter of distilled water.

The A.S.T.M. Method D 155-32 T., requires that oils of this color shall be diluted, 15 per cent oil and 85 per cent kerosene (not darker than +21 Saybolt), before measuring the color. The symbol designating the color should be followed by "Dil." to indicate that the figure represents the diluted solution of the oil.



10 Carloads *of Quality* Welded Vessels

Thirty days after the Continental Oil Company placed an order for ten welded oil chilling tanks the first unit was on its way to their Ponca City refinery. Three weeks later the entire lot had been shipped.

For oil chilling service it is vitally important that the tanks and circulating tubes be given proper heat treatment to counteract the stresses set up in the steel by the low temperatures carried.

Following fabrication by qualified welders these vessels, with their necessary headers and tubes, were stress relieved in our precision instrument controlled furnace.

Highest quality workmanship and fast service are characteristic of the Vogt Company.

Manufacturers of: Oil Refinery Equipment, Drop Forged Steel Valves and Fittings, Ice Making and Refrigerating Machinery, Water Tube Boilers, Heat Exchangers.

New York
Chicago
Cleveland
Philadelphia
Dallas

HENRY VOGT MACHINE CO.
INCORPORATED
LOUISVILLE, KENTUCKY.

Vogt HOMOWELD Equipment

PERSONAL PARAGRAPHS

G. W. Halse, chief geologist of the British Controlled Oilfields, Ltd., has left London for Venezuela.

• • •

J. A. Ward of the Ward Oil & Gas Company, has returned to Casper, Wyo., from a business trip to Minneapolis, Minn.

• • •

E. L. Shea, executive vice president, Tide Water Companies, New York, paid a visit to the Tulsa office of the company last week.

• • •

A. M. Lockhart, one of the founders of the Rio Grande Oil Company, which was started in El Paso, Tex., in 1915, has resigned as vice president of the company.

• • •

B. F. Weekly, E. J. McCurdy, Jr., and Elliott Cowden, independent operators of Fort Worth, Tex., have been on a deer and bear hunt in the mountains near New Mexico.

• • •

J. F. Corcoran, special oil field representative, Trimont Manufacturing Company, Boston, Mass., whose headquarters are in Tulsa, has left for a trip through the Louisiana fields.

• • •

R. S. Shannon of Denver, Colo., general superintendent for the Rocky Mountain territory, Continental Oil Company, was in Casper, Wyo., conferring with the district superintendent, Joe Dyer.

• • •

E. F. H. Mercier and J. A. Merry, chairman and managing director of the Compagnie Francaise des Petroles, have returned to Paris from a visit to Iraq, when they inspected the progress of the construction of the pipe line.

• • •

J. R. Pemberton, oil umpire in California, was the chief speaker at the regular dinner meeting of the Petroleum Accountants Society, held at the Royal Palms Hotel, Los Angeles, Calif. Mr. Pemberton's subject was "Crude Oil Production Proration."

• • •

H. S. Austin, chief superintendent of pipe line construction for the Iraq Petroleum Company, Ltd., and president of the Ajax Pipe Line Company, has returned to London after having spent several weeks in Iraq, where the construction of the new pipe line has commenced.

• • •

Announcement has been received of the marriage of Miss Ella Rathvon of Casper, Wyo., and Joseph Dyer of Parkerton, Wyo., at Billings, Mont., November 12. The bride is the daughter of Martin T. Rathvon of Casper, general manager for the Argo Oil Company. Mr. Dyer is superintendent in Wyoming for the Continental Oil Co. Mr. and Mrs. Dyer left by automobile for south Texas and Louisiana where they will spend their honeymoon.

• • •

A party of officials and department heads of the Amerada Petroleum Corporation from Tulsa and Fort Worth, Tex., made a business trip to the San Angelo, Tex., district offices recently. The party consisted of Allmand M. Blow of Tulsa, vice president, H. G. Officer of the land department of Tulsa, H. E. Marsh, head of the land department for Texas, and A. R. Denison, geologist for Texas, both of Fort Worth.

• • •

After nearly 38 years' association with the Standard Oil Company (New Jersey) and various subsidiaries, F. L. Williams, a director of Stanco Distributors, Inc., has retired. Mr. Williams first joined the organization in 1891, when he went to work for the Standard Oil Company of Kentucky. In 1904 he became an auditor for the New Jersey organization, and in 1906 was transferred to the foreign shipping department, where he remained until 1919, when he went to the comptroller's department. He joined the Stanco organization in 1928, and in the following year was elected a director.

W. E. Field has been appointed general manager for Australia of The Texas Company (Australia), Ltd.

• • •

H. B. Simcox, assistant manager of the production department of Continental Oil Company, Ponca City, Okla., has been transferred to California.

• • •

H. L. Funkhouser of Fort Worth, Tex., was in Casper, Wyo., recently on business. Mr. Funkhouser was one of the pioneer operators in the Rocky Mountain region.

• • •

William Holland, superintendent of operations for the Ohio Oil Company in the western division, has returned to his Casper, Wyo., headquarters from an extended visit in California.

• • •

John Wilson, president of the National Supply Companies, accompanied by Mrs. Wilson, D. S. Faulkner, director of manufacturing, National Supply Companies, and Charles Barton, vice president of Spang, Chalfant & Co., Inc., after spending a week in London, returned to New York on the "Bremen."

Men of the Industry

BERNARD L. MAJEWSKI

Bernard L. Majewski, vice president and general sales manager of the Deep Rock Oil Corporation, was born in Chicago on January 14, 1895. His early education was completed in the public schools of Chicago at 12. He finished a business college course at 13 and his high school education at night during the next 8 years, being employed meanwhile in the day time by the Standard Asphalt & Refining Company, successively as office boy, clerk, stenographer and eventually superintendent in charge of production in the Chicago plant of that company. He resigned the last named position in 1916 to take a tank wagon driver's job with the Consumers Refining Company, which later was absorbed by what is now the Deep Rock Oil Corporation.

In the 15 years with his present association, Mr. Majewski has been bulk station agent, supervisor, division manager, general sales manager, vice president and director. His present duties consist of directing the sales and distribution systems of the Deep Rock Oil Corporation and its subsidiaries. With his wife and four children he resides in Algonquin, Ill.

V. W. Bailey, purchasing agent, Taubman Supply Corporation, is convalescing from an operation.

• • •

M. E. Roberts of Douglas, Wyo., interested in operations in central Wyoming, has moved to Odessa, Tex., for a few months.

• • •

J. B. Durkee, district representative of A. M. Byers Company, Pittsburgh, Pa., has been transferred from Dallas, Tex., to Tulsa.

• • •

R. C. Stamets, of the pipe sales division of the Oil Well Supply Company, Dallas, Tex., spent several days in Tulsa during the past week.

• • •

A. Baker, at the head of the land department of the Ohio Oil Company with Casper Wyo., headquarters, is on a business trip to Denver, Colo., and New Mexico.

• • •

Lester L. Luecke, engineer for the Gulf Oil Corporation in the Barco concession of Colombia, has returned there after spending a month with relatives at Wichita Falls, Tex.

• • •

Carl von Bibra, president of the Exeter Oil Company, was injured when he was thrown from a horse while riding at the Palos Verdes Estates. His many friends hope for a speedy recovery.

• • •

F. J. Spang of Butler, Pa., superintendent of the manufacturing plant of Spang & Company, L. F. Porter of Winfield, Kans., special representative, and A. E. Lidderdale of Billings, Mont., Rocky Mountain representative, were in Casper, Wyo., recently.

• • •

A. M. Butcher, formerly purchasing agent for the Indian Territory Illuminating Oil Company, has been appointed field engineer in the Mid-Continent territory, for the Boston Woven Hose & Rubber Company, Cambridge, Mass., effective November 1.

• • •

H. S. Brautigam, district sales manager, Allegheny Steel Company, Brackenridge, Pa., spent several days in Tulsa and other points in the Mid-Continent territory recently. He was accompanied by R. D. Gwynne, southwestern representative of L. R. Flori Company, St. Louis, Mo.

• • •

Elmer E. Bryner, widely known oil man in the eastern fields, and Mrs. Bryner, celebrated their fiftieth wedding anniversary at their home in Custer City, Pa., on Sunday, November 13. Mrs. Bryner was a daughter of Mr. and Mrs. Hudson Philo Hudson of Titusville, the father of all oil towns.

• • •

N. O. Fanning, petroleum statistician, formerly on the staff of The Oil and Gas Journal, and for the past four years on the statistical staff of Carl H. Pforzheimer & Company, has become associated with Rhoades, Williams & Company, members of the New York Stock Exchange and associate members of the New York Curb Exchange. Mr. Fanning will make his headquarters at the company's uptown office at 1 East 57th Street, New York.

• • •

Stanley C. Hope, vice president and general manager of the Gilbert & Barker Manufacturing Company since 1929, has been elected president, succeeding C. C. Ramsdell, retired. Gilbert & Barker is a subsidiary of the Standard Oil Company (New Jersey). In the 20 years Mr. Hope has been connected with the company, he has traveled over a good part of Europe and Africa, having been assigned in 1919 to the affiliated European units of the Standard Oil Company (New Jersey) in the development of underground storage and pump delivery of gasoline. Mr. Hope was elected second vice president of Gilbert & Barker in 1926. Mr. Hope has been a director of Stanco, Inc., since its formation, and retains this office in addition to his other duties with Gilbert & Barker and Atlas Supply Company.

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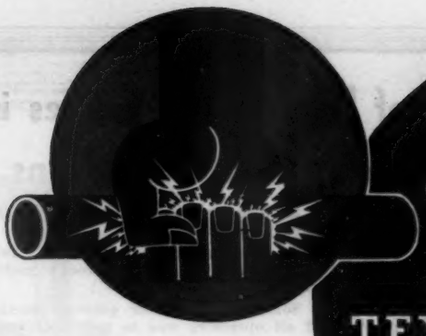

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NATURAL GAS DEVELOPMENTS

Lone Star Gas Concludes Testimony in Rate Case

FORT WORTH, Tex., Nov. 21.—The Lone Star Gas Co. rate hearing before the Texas Railroad Commission was recessed after the company concluded its defense of gate rates at the limits of 250 cities and towns in Texas.

The last witness, Ed C. Connor of Dallas, consulting natural gas engineer, considered reasonable and fair under normal economic conditions an annual net return of 10 per cent on public service properties, exclusive of an annual return of 5½ per cent for depreciation reserve and an allowance for Federal income taxation.

Karl Griffith, Dallas, chief counsel for Lone Star, told Chief Examiner Olin Culberson of the railroad commission he felt the company had fully discharged the burden of showing that its rates are more than fair.

Culberson replied that the commission planned to make a check of the evidence submitted by Lone Star in order to prepare for cross-examination of Lone Star witnesses, that the commission desired a recess but had not informed him when the hearing would be resumed.

Mr. Connor explained his conception of annual reserve accruals to offset the decline in property values due to depreciation of physical units. Such operating allowances must be made, he said, to provide for removals of property units, replacements and major rehabilitation. The depreciation of steel pipe, he said, is the major item in his calculations.

The domestic demand per consumer ranges, he said, from 80 to 1,000 feet a day. The maximum domestic demand on the Lone Star system occurred January 8, 1930, when 270,000,000 feet of fuel was sent out through the company's pipes. On that day facilities of the system were taxed to supply the need for gas, he said.

"Is there any reason to believe that such a demand may not occur in the next 90 days?" Griffith asked. Mr. Connor replied that the company must be prepared to meet such demand, that the gas business is extremely uncertain. He said the domestic demand had dropped as low as approximately 30,000,000 feet a day.

"Is any other class of public utility required to meet such a wide difference in demand?" Griffith asked. Mr. Connor replied that the natural gas business is unique in this respect.

Harrison Smith, New York engineer, said the present fair value of the entire physical and nonphysical production and transmission properties of the company in Texas and Oklahoma was $72,374,402. He said the company is 96.01 per cent efficient, and that without this depreciation figure the fair value would be $72,386,065, which he set as the reproduction cost new.

E. A. Steinberger, Dallas, chief appraisal engineer for the company, had set the fair value at $70,927,635, and, with Ed C. Connor, had found the properties were in 93.7 per cent of new condition.

P. McDonald Biddison found the physical properties of the company are in 92.8 per cent new condition. His testimony showed the following percentags of condition in which general classifications of property were found and the present fair value:

Production system property 99.6 per cent condition, present fair value of $10,036,986; gathering system property 85.7 per cent, $1,493,405; transmission system 92.8 per cent, $37,205,259; compressor station property 87.1 per cent, $5,275,655; general system property 83.4 per cent, $1,878,961.

Wide Variety of Reasons for Losses in Natural Gas Production Operations

The Federal Oil Conservation Board's latest report, discussing natural gas losses, says:

Gas is lost in quantity in at least four major operations of the petroleum and natural gas industry by losses in production, that is, associated with oil and not associated with oil; losses of residue gas (blown to the air at natural gasoline plants); losses in transportation (leakage from high pressure natural gas transmission lines); losses in distribution and utilization.

Losses in production occur for a wide variety of reasons, but of outstanding importance is the fact that much of the gas brought to the surface is directly associated with oil. The board believes that the major losses of natural gas occur in conjunction with the production of oil, and no line of demarcation can be drawn between the natural gas industry and the petroleum industry. In fact, between 60 and 70 per cent of the natural gas actually utilized in the United States is produced with crude oil.

Load Factors

The demand for gas over and above its use as a fuel in the field depends upon such controls as industrial and domestic load factors. It has been established that the energy in gas under pressure is the chief motivating force in bringing oil from the sand to the surface and that to produce oil efficiently, the attendant gas must be under control. Realization of the significance of this function, has caused gas engineers to measure well efficiencies in terms of gas-oil-energy relationships and they are seeking means by which oil and gas production can be brought into better balance. Several years ago it was thought by producers that the gas which accompanied the oil was a necessary evil, with the result that billions of feet of gas were wasted. Today, it is realized that this practice was not only wasteful but useless. The producers are now studying the gas-oil-energy relationship not only to determine the efficiency of their wells as producers of oil but also to plan programs to prevent excessive gas production when there is no commercial outlet for the gas and retain it in the ground or return it to the formations for production in conformity with the best principles of oil and gas conservation. The injection of gas into reservoir sands is a conservation measure so important that every effort should be made to return to the producing formations all gas that is now wasted or is not put to efficient use.

Conservation Plans

In considering gas that is produced unassociated with oil, the study of gas well deliveries and related problems is in the first rank of those upon which natural gas conservation depends. When the fundamental concepts and relationships have been determined and their application to field conditions is definitely understood it will be possible not only to prevent actual gas waste to the air and otherwise but also to plan definite gas depletion and gas storage programs with maximum recovery of gas and maximum efficiency in operation. The three objectives of a study of gas well deliveries are:

1. The elimination of the wide open blowing of wells to determine the capacities of the wells to produce gas.

2. The availability of gas at different back pressures.

3. Thorough understanding of the fundamentals of gas flow through underground structures.

Some years ago the general practice of all operators was to test their wells periodically by the "open flow" method. Because the reliability of a better method had not been proved, prior to 1929, open flow tests were permitted on wells on public and Indian lands and several of the state conservation commissions still require these open flow capacity tests. One state, however, has definitely modified its orders regarding the making of open flow tests to conform with the pressure relationship method developed by the engineers of the Bureau of Mines.

Gauging Wells

When a fundamental basis for controlling and gauging natural gas wells to determine the open flow capacities of the wells without blowing gas to the atmosphere was first proposed by the U. S. Bureau of Mines, working in co-operation with the Natural Gas Department of the American Gas Association, some engineers questioned the authenticity of the results. However, as data have been developed further, many natural gas engineers of nationally recognized standing have stated publicly that the principles of gauging gas well capacities as formulated in the initial published treatment of the subject are working out staisfactorily in the majority of wells. Under this co-operative research program, 656 tests have been made on 489 gas wells in Louisiana, Ohio, Oklahoma, Texas Panhandle and the Rocky Mountain area. Some idea of the savings which are being effected through the use of the back pressure method of gauging gas well capacities may be obtained from the following typical examples:

In many areas of the Texas Panhandle it is necessary to blow the wells for at least 30 minutes, many of them for one hour or longer, before accurate readings of open flow can be obtained with a pitot tube gauge. Tests by the U. S. Bureau of Mines engineers on 221 wells in the Texas Panhandle by the back pressure method show an equivalent total open flow capacity of approximately 5,500,000,000 feet per 24 hours. If an actual open flow test had been made on these 221 wells, assuming a minimum of 30 minutes to obtain settled flow, more than 100,000,000 feet of gas would have been blown to the air merely to make these tests.

Similar conditions were found in other areas where tests were made. In addition to the actual saving by the back pressure method of gas which otherwise would be blown to the air in open flow, the possible detrimental effects on the mechanical and sand conditions of the wells are eliminated. The work on this conservation problem is by no means complete but a proved method for gauging gas well capacities without attendant loss of gas is now available to the industry. Furthermore, knowledge of back pressure relationships has had other successful applications such as forecasting drilling requirements in "dry" gas areas; determining the presence of cavings in wells; designing gathering systems; determining operating pressures; estimating costs of production; and judging the advisability of storing gas in sands.

Wm. von Gemmingen Dies; Was Noted Gas Engineer

NEW YORK, Nov. 21.—Word has been received here of the death at Eastland, Tex., of William G. von Gemmingen, consulting engineer, who has been active in the manufactured and natural gas industry for 20 years as a consultant and operating official. His offices were in New York.

He was born 50 years ago in West View, Va., the son of Baron Sigmund von Gemmingen, who came to this country before the Civil War and married Miss Mary Webb of Richmond, Va. He was educated at Rock Hill College and in Germany at the University of Gottingen. In 1910 he became construction engineer with Forstall & Robinson and served as general supeintendent of the gas plant at Brockton, Mass., and managed several other gas properties. He was associated as construction engineer with Isbell Porter in Newark, N. J., and was general manager of the Norfolk City Gas Co. During the war he was operator of gas plants in Meriden, Conn.; New Haven, Conn.; Brockton, Mass.; Massena, N. Y., and Schenectady, N. Y. In 1918 he was at the Baltimore plant of the U. S. Industrial Chemical Co. engaged in research on the recovery of potash glycerin, tar oils, gas and decolorizing carbon. He then joined the Aluminum Co. of America and put in a new carbon and gas plant.

Joining Ford, Bacon & Davis in 1921, he was senior gas engineer for seven years. For three years before establishing his own consulting engineering practice, Mr. von Gemmingen was with G. E. Barrett Co. as technical advisor on gas problems.

PANHANDLE HEARING SET

AUSTIN, Tex., Nov. 21.—The Railroad Commission has called a hearing at Amarillo December 12 to consider the production and marketing of natural gas in the Panhandle area to determine the allowables. This will be the first gas hearing under the new law providing that the commission, whenever the full production from wells producing gas only is in excess of a reasonable market demand, shall inquire into the production and demand and determine the production.

The commission also will adopt rules governing the conservation of natural gas and fix the oil and gas ratio on wells producing both oil and gas.

HEARING AT LAREDO

LAREDO, Tex., Nov. 21.—At the conclusion of a hearing of an appeal of the United Gas Public Service Co. from gas rates ordered by the city of Laredo, Ernest O. Thompson, member of the State Railroad Commission, gave both sides 30 days in which to prepare briefs and indicated it would be several months before an opinion would be given. The appeal was from a city ordinance which lowered the rates from 75 to 42 cents per 1,000 feet.

LONE STAR TAKES RANGER LINE

Lone Star Gas Corp. has agreed to purchase a 25-mile natural gas pipe line and take over leases on approximately 35,000 acres of proved gas producing lands in an area near Ranger, Tex. Properties involved are part of American Power & Light System.

OKLAHOMA UTILITIES MEETING

The fifteenth annual convention of the Oklahoma Utilities Association will be held at the Hotel Biltmore, Oklahoma City, March 7 and 8, 1933. The convention will be the same in character as that held at Tulsa in 1932.

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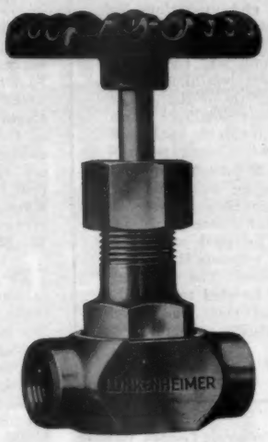

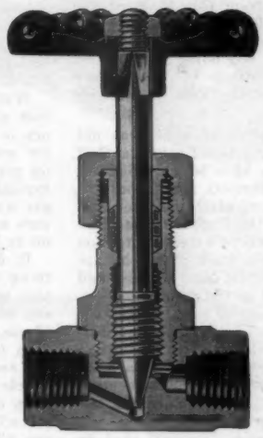

Figs. 1728 & 1730

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Fig. 1728, excepting the gland, is made of carbon steel; the gland is stainless steel. Fig. 1730 is made entirely of stainless steel and is suited for controlling oil containing sulphur compounds, or for use where corrosive fumes or atmospheric conditions might cause carbon steel to corrode. Both are offered in sizes 1/8 to 1/2 inch.

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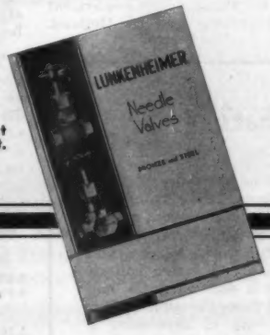

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FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing or transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depth of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Methods of Dealing With Crude Oil Emulsions Are Discussed

In the Field Problems department of your issue of September 8, 1932, you explained the use of chemicals in breaking down oil-field emulsions. I would appreciate it if you would tell me what other methods are in use. Tell me, please, not only the name of the method, for I have seen references to several of them, but briefly of what the method consists. —F. T. S.

One of the methods of course is that of treating emulsions with chemicals, as described on this page in The Oil and Gas Journal of September 8. As you already have read that, there is no need to refer further to that procedure. Other methods are commented upon as follows by Jacque C. Morrell and Gustav Egloff in their work on "Colloid Chemistry of Petroleum":

"Settling. When oil containing both emulsions and free water is allowed to stand in a tank or sump, breakdown of the emulsion sometimes occurs. Usually, however, there is a separation into an oily layer, a layer containing emulsified oil, and a layer of water. The free oil is pumped from the top and passed to storage.

"Heating at Atmospheric Pressure. In some cases emulsions may be broken by gentle heating, in storage or special open tanks, by means of a steam coil. This is a wasteful and unsatisfactory method. Emulsified oil may be distilled at atmospheric pressure in either shell or tube stills. This is a slow, tedious and expensive process, with the ever-present risk of the oil still foaming over. In the parlance of the oil refiner, the still 'pukes.'

"Heating or Distilling at Elevated Pressure. Pressure distillation in either shell or tube stills is the most generally applicable of all methods for the breaking of crude oil emulsions. It is rapid in action and eliminates the danger of foaming, or puking. Very stable California emulsified crude oils have been distilled under moderate pressure at a rate as high as 10 times as great as that possible under atmospheric pressure in the same apparatus. The pressure distillation and condensation of the vapors of emulsified oils at elevated temperatures can be carried out not alone to dehydrate oil, but also to crack it into motor fuel.

"Electric Dehydration. The use of electricity in the dehydration of emulsified oil has developed from the work of Cottrell on the electric precipitation of solid particles suspended in air or other gases, such as fog or smoke. An alternating current with a high potential difference is employed. In the application of the alternating current the field is continually reversing, so that the only tendency is for the irregularly distributed globules of water to arrange themselves along the shortest lines between the electrodes. The globules form chains and gradually coalesce along these chains. The direct current method is also used in dehydrating oils.

"Centrifuging. Centrifuging is used in the dehydration of crude oil emulsions, but chiefly in combination with some other method of dehydration; for example, heat or chemical reagents.

"Filtration. In some cases crude oil emulsions may be resolved into their components by passage through a filter. When the filter is more readily wetted by the water than by the oil, separation is facilitated."

Many methods have been used successfully to break crude oil emulsions, but engineers say there is room for improvement not only in breaking these emulsions, but in breaking bottom settlings and other emulsified materials which accumulate in the refinery.

Oil Areas Discovered by Use of Geophysical Instruments

Will you please give me the names and locations of oil-bearing structures of the United States whose discovery was attributed to the torsion balance and those whose discovery was attributed to the seismograph?—C. T. S.

This department is indebted to the American Askania Corp. for the following answer to your question:

"There is such an abundance of areas where successful geophysical work has been done since 1924 that we can cite only a few instances where geophysical surveys have been checked by actual drilling and where oil was encountered. Among the torsion balance successes the following might be mentioned: Hankamer Dome and Esperson Dome, Liberty County, and Sugarland Dome, Fort Bend County, Texas. On these structures, first commercial production was established at a depth of about 2,700 to 3,500 feet.

"The following seismic prospects, among many others, were successfully worked out and oil produced at a depth from about 3,200 to 4,700 feet: Port Neches, Orange County, Texas; Caillou Island; Terrebonne Parish, Louisiana; Fannett Dome, Jefferson County, Texas.

"You will see from this that for the same type of geological structures, both types of geophysical instruments can or have to be used depending entirely on the physical conditions of the surface and subsurface in the area to be surveyed.

"Of course geophysical work was not limited to the Texas and Louisiana Gulf Coast, but surveys have been carried out in various other districts throughout the United States, particularly in the Mid-Continent and on the Pacific Coast. Two interesting fields where extensive torsion balance and seismic work was done are the Hobbs oil field in New Mexico and the Seminole Field in Oklahoma.

"Since you inquired only about the structures located with the torsion balance and seismograph, we will not go into magnetic prospecting at this time although magnetometers have been used on a large scale in practically all important oil districts of this country.

"We would suggest, however, that in case the above general information should not serve your purpose, you get hold of the bulletin of the American Association of Petroleum Geologists, Tulsa, vol. 14, No. 9, of September, 1930, and read the article by D. C. Barton on 'Review of Geophysical Prospecting for Petroleum, 1929,' or the Quarterly of the Colorado School of Mines, Golden, Colo., vol 24, No. 1, March, 1929, on 'Geophysical Methods of Prospecting' by C. A. Heiland.

Why Was It Called That?

SOLAR ENGINE

A solar engine is an engine in which the energy of solar heat is used to produce motion. "Solar" comes from the Latin "solaris," from "sol," sun. For many years scientists and engineers have attempted to invent a machine which would make it commercially profitable to transform some of the enormous energy received from the sun into useful work. Mirrors and other refectors have been devised for focusing sunlight on water boilers, thus generating steam. There are those who forecast a day when the mechanical power needed in the oil field will be derived from the sun. A San Francisco inventor, Jesse J. Warner, has found a way of harnessing a certain amount of solar energy and using it to produce rotary motion. Several reflectors focus the sun's rays on tungsten wires, which are very sensitive to changes in temperature. The heat causes these wires to expand, and in so doing they move a ratchet, which turns a wheel. As the motion progresses, the wires are carried into a trough of water, where they are cooled. This causes them to contract, after which the cycle is repeated.

No Relationship Between Closure and Accumulation of Water

There is a question about water being produced with oil that I am somewhat hazy on and I cannot seem to find the answer in any geological work that I have access to. Why should oil wells on a structure such as the Voshell Pool make water even though the closure is 100 feet and the oil sands are much less than half that? I lived in Harvey County, Kansas, for many years and am interested in McPherson County.—M. M. C.

There is no apparent reason for trying to connect the type of closure with the accumulation of oil, gas and water in the reservoir. In nearly every type of underground oil reservoir there is water in contact with the oil at some point. It may be bottom or edge water but according to the accepted theory of oil accumulation it is assumed that water has forced the oil and gas ahead of it into the upper part of the structure.

The Voshell Pool is a narrow, sharply folded anticline with a fault along the west. The pool is approximately 6 miles long and only about one-half mile wide and along the long axis of the anticline the fault extends.

Water might come up into the reservoir along with the fault, but this theory is by no means necessary to account for water in the formation. Any work on petroleum geology will show you the typical anticline and you will note that gas is accumulated at the top of the structure with water down the flanks and the oil in between the gas and the water.

It does not seem that there is anything unusual about the Voshell structure to explain the presence of water in any way different from the accumulation of gas, oil and water in most pools.

In the October 6, 1932, issued of The Oil and Gas Journal you will find an article by E. H. Griswold with illustrations that may aid in explaining a typical oil structure and the movement of gas, oil and water.

What Size Rotary Drills Should Be Used at Top and Bottom?

I am interested in knowing what size rotary drills are used at top and bottom in drilling a well, say, 6,000 feet. What should be the diameter of the drilled hole and the size of the casing at the top and bottom?—G. E. J.

There are no standard casing programs for wells drilled with rotary outfits and as the size of the casing determines the diameter of the hole drilled conditions vary even in the same fields. Following are some approximate figures for the Oklahoma City Field's 6,500-foot wells and for the Gulf Coast Field's 6,000-foot wells:

OKLAHOMA CITY FIELD

Casing programs—	Diameter of hole
300 ft. 16-in., 65-lb. csg.	20 in.
5,200 ft., 9-in., 40-lb. csg.	12 in.
6,500 ft., 7-in., 23-lb. csg.	9 in.

GULF COAST FIELDS

1,200 ft., 13⅜-in., 48-lb. csg.	15 in.
4,000 ft., 9⅝-in., 36-lb. csg.	12 in.
5,600 ft., 7 -in., 26-lb. csg.	9 in.
6,000 ft., 4½-in., 16-lb. csg.	6⅝ in.

This list might be continued at length if all casing programs for all fields were to be included, but the foregoing is representative and probably will serve your purpose.

"CATERPILLAR" ENGINES FOR HEAVY OIL-FIELD duty *

✱ FOR stationary, portable and semi-portable work, here's a heavy-duty, slow-speed engine line to meet a broad range of the oil producer's power requirements. An engine line built by "Caterpillar" and competently serviced by the efficient world-wide organization of "Caterpillar" dealers.

Though "Caterpillar" Engines are newly available as separate power units, they're veterans at licking tough oil-field tasks from one end of the industry to the other, powering "Caterpillar" Tractors.

Write for detailed information and prices on "Caterpillar" Engines.

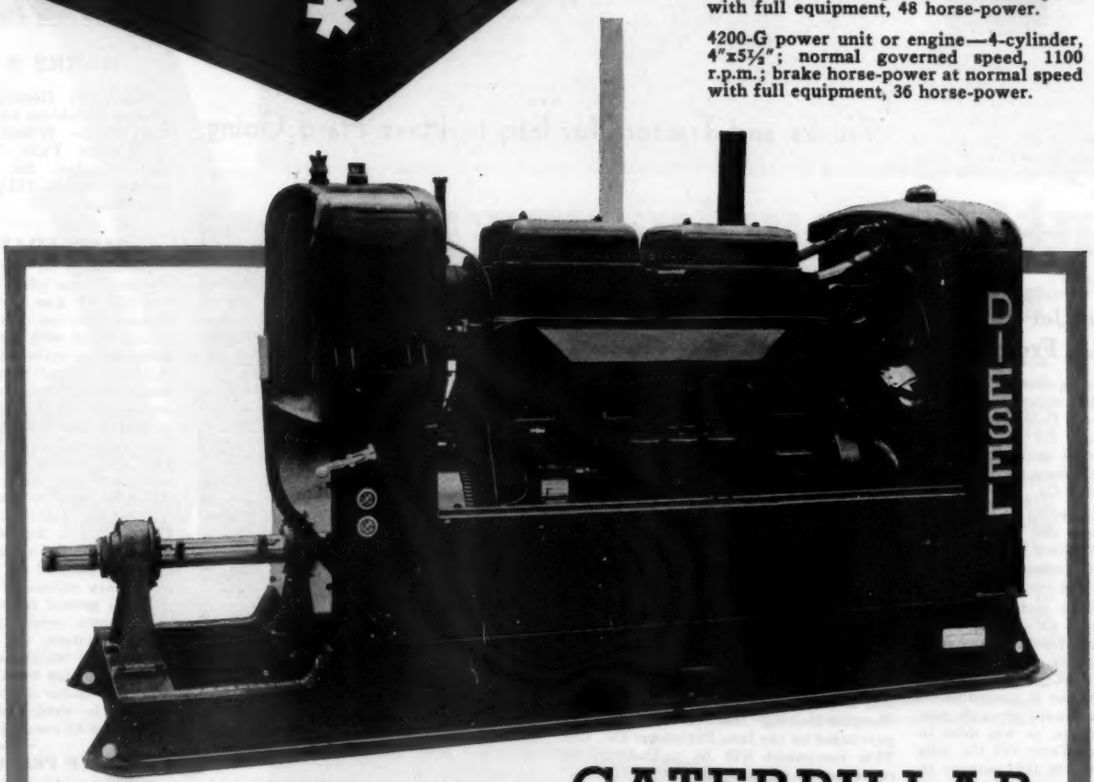
D-9900 (Diesel power unit or engine)—4-cylinder, 6⅛"x9¼"; normal governed speed, 700 r.p.m.; brake horse-power at normal speed with full equipment, 88 horse-power.

9000-G power unit or engine—4-cylinder, 7"x8½"; normal governed speed, 650 r.p.m.; brake horse-power at normal speed with full equipment, 87 horse-power.

7500-G power unit or engine—4-cylinder, 5½"x6½"; normal governed speed, 850 r.p.m.; brake horse-power at normal speed with full equipment, 63 horse-power.

6000-G power unit or engine—4-cylinder, 4⅞"x6½"; normal governed speed, 850 r.p.m.; brake horse-power at normal speed with full equipment, 48 horse-power.

4200-G power unit or engine—4-cylinder, 4"x5½"; normal governed speed, 1100 r.p.m.; brake horse-power at normal speed with full equipment, 36 horse-power.



Caterpillar Tractor Co., Peoria, Ill., U. S. A.
Track-type Tractors Combines Road Machinery
(There's a "Caterpillar" Dealer Near You)

CATERPILLAR

REG. U. S. PAT. OFF.

NEW AND IMPROVED EQUIPMENT

New Series of Fittings Is Put on Market by Key

The Key Boiler Equipment Co. of East St. Louis, Ill., announces its new series 6500 fittings for use on cracking stills, tube stills and condenser coils.

These fittings are attached to the tubes or pipes by means of differential thread sleeve couplings, which eliminate the

necessity of rolling the tubes into the fittings. Convenient access to tubes for clean-out or inspection is provided for by closure plates with tapered joints. These closure plates are kept in place by powerful holding devices and are equipped with deflectors to provide full streamline flow through the fittings.

The illustration shows the return bend fitting, but the complete series includes fittings for any form of tube layout or assembly.

Annular Steam Jet Pump Removes B.S. From Tanks

The Sludge Pumping Inc., 25 Church Street, New York, has entered the oil refining and tank farm field with a new and simple apparatus for b.s. removal, which has been tested in jobs recently completed in the Bayonne, N. J., plant of the Tide Water Oil Co.

This apparatus, according to the manufacturer, will remove the heaviest b.s. from storage and cracking coil tanks together with the coke, carbon, scale, sand, etc., often found in the residue.

The pump, about 18 inches long and 5 inches in diameter, is an annular steam jet pump which allows for the transfer of solids as well as liquids and gases. The action of the steam jet on the kind of material described makes it pumpable by ordinary oil transfer pumps through pipe lines for great distances, as was done in the case of the Tide Water Oil Co. jobs where it was delivered in this manner to a point 4,000 feet away, and there stock oil was mixed with it and the whole satisfactorily pumped as fuel through ordinary burners.

An additional steam jet is at a point where the discharge line is increased from 3 to 4 inches, and is used when pumping the heavier b.s.

These pumps are connected by flexible steel hose and they derive their power from any steam supply at 65 pounds pressure or higher. This method and apparatus are said to transform what formerly was a waste, hard to dispose of, into an asset readily burned as fuel.

Among the Equipment Houses

A. L. Freedlander, vice president and factory manager of the Dayton Rubber Manufacturing Co., was a passenger on the Graf Zepplin from South America to Germany on its recent trip from Pernambuco, Brazil. Mr. Freedlander went to South America to investigate the development of rubber plantations in the Latin American countries.

—

Leonard E. Vaughn, formerly sales manager of the Wilson & Willard Manufacturing Co., later the Byron Jackson Co., has established an office in the Webb-Wilson Building, Huntington Park, Calif., to work as an intermediary between selected manufacturers and supply houses in the petroleum industry. He will specialize in the development of oversees' sales.

—

The one-week welding course offered by John Huntington Polytechnic Institute, Cleveland, Ohio, in co-operation with the Lincoln Electric Co., will be repeated several times this winter. Six days are spent in the operator's training school of the Lincoln Electric Co. Each evening from Monday to Friday a lecture on designing for arc welded construction is given at the institute. Applicants must be college graduates in engineering or have equivalent practical experience.

—

The L. R. Flori Co., St. Louis, Mo., has opened an office in Tulsa with R. D. Gwynne in charge. The company will serve as exclusive representative and distributor for the Allegheny Steel Co., whose products include line pipe and casing; iron pipe, casing and tubing; copper-bearing pipe, casing and tubing, seamless steel tubes, boiler flues, alloys, etc.

—

J. S. Tritle, vice president and general manager of the Westinghouse Electric & Manufacturing Co., has been elected president of the National Electric Manufacturers Association, to succeed John H. Trumbull, former governor of Connecticut.

—

The exhibit of the Brown Instrument Co., Philadelphia, Pa., at the New York Power Show, December 5 to 10, will feature the company's new mechanical flow meter measuring flow through a pipe circuit, part of which is made of glass, so that the observer can see the flow through the orifice.

Trucks and Tractors for Iraq to Have Hard Going

Model A-7 International motor truck being assembled in Haifa

A fleet of 64 International motor trucks and a fleet of 68 specially equipped McCormick-Deering tractors recently were purchased by the Iraq Petroleum Co., Ltd. This equipment will be utilized in the construction of two pipe lines which will take oil from beyond the Tigris River in eastern Iraq across hundreds of miles of virtually uninhabited and trackless desert to the Mediterranean.

In the day-after-day transport of essential supplies across this rough desert country with its lack of roads, scarcity of water, high temperatures, occasional deep creek or river beds (wadis), salt marshes, etc., automotive equipment will have to prove its merit in difficult tests. Grades are frequently steep and much of the country is covered with lava rock and highly abrasive sand and dust, which add their own troubles to smooth mechanical operation. This lava rock is mostly in the form of boulders from one-half foot to 2 or 3 feet thick. The sand under these rocks is loose and removal of the rocks does not help much in the construction of roadways.

Of the 64 International motor trucks that will be utilized on this Iraq project, 48 of the units are Model B-2, 1½-ton, six-speed, special motor trucks of 136-inch wheelbase; nine Model A-4, 2-ton speed trucks, four of which are equipped with winches; five Model A-5, 3-ton speed trucks; one Model A-7, 5-ton heavy-duty motor truck; and one Model A-8, 7½-ton heavy-duty motor truck. The fleet of tractors on the project will include 60 McCormick-Deering 10-20 and eight 15-30 industrial tractors, all of which will be fitted with crawlers and pipe line handling equipment.

Men Well Known in the Equipment Field

HARRY F. HEINISH

Harry F. Heinish was recently appointed Oklahoma and Kansas representative for the Wilson Manufacturing Co. of Wichita Falls, Tex., maker of oil field winches. Mr. Heinish will have headquarters at 1111 South Denver Avenue, Tulsa.

PYRANOL-FILLED CAPACITORS

Reductions in size, rating for rating, are among the advantages of a new General Electric line of capacitors for power-factor correction. These devices are treated and filled with Pyranol, dielectric material whose extraordinary insulating and dielectric properties permit an unusually small capacitor for a given rating, and one which is nonimflammable and nonexplosive. The line also includes new box-type units and small rack-type capacitors, both for indoor service. The individual capacitor unit consists of one or more flattened rolls of paper and aluminum foil, pressed together, and enclosed under Pyranol in a hermetically sealed steel case. The rolls, each having two sheets of foil separated by thin laminations of paper, are connected in either one, two or three groups for single, two or three-phase units, respectively. The new box-type capacitors, for indoor service, are of the type which can be connected directly to motor terminals or to the line side of a motor switch. These units are enclosed in welded sheet-steel cases and provided with conduit boxes.

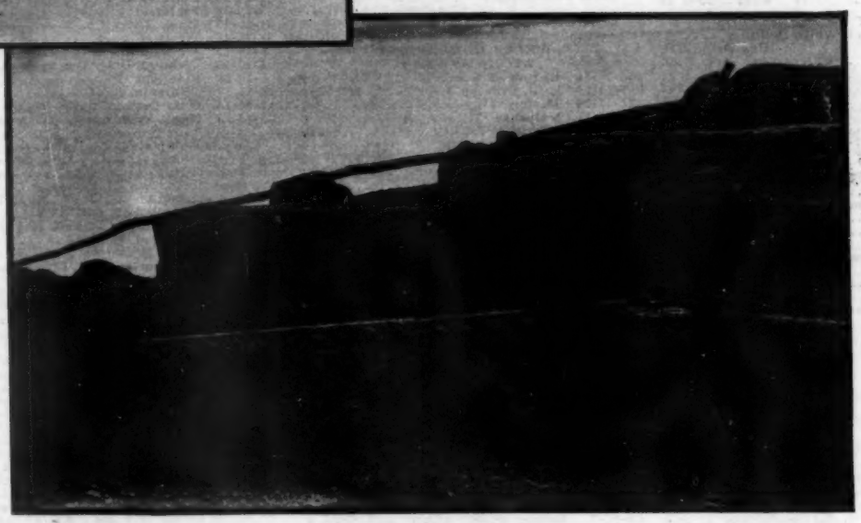
TWO VICE PRESIDENTS CHOSEN

Following the meeting of the board of directors of the Westinghouse Electric & Manufacturing Co., held in New York, President F. A. Merrick announced the election of two vice presidents. C. E. Stephens, formerly commercial vice president, was elected vice president. N. G. Symonds, formerly commercial vice president, was elected vice president in charge of sales.

Lunkenheimer bottle oilers, made by the Lunkenheimer Co., Cincinnati, Ohio, are described and illustrated in an eight-page booklet, sent on request.

At the left, photograph of Federal gunboat of Civil War days sunk in the Mississippi River near Kimmerswick, Missouri. Below, close-up photographs of Wrought Iron plate, spikes and nails—which have withstood constant contact with water for 68 years.

For the historical facts regarding the Union gunboat, we are indebted to an article in the St. Louis Post Dispatch, August 12, 1930.



68 years submerged in "Muddy Water"

HIGHLAND WROUGHT IRON

Bar Iron, but Highland Quality—made by Specialists for Locomotive Drawbars, Engine and Tender Truck Equalizers, Valve Yokes, Spring Hangers, Engine Bolts, and scores of other important parts.

• These Wrought Iron plates, nails and spikes, which have been soaking in the Mississippi, are still capable of putting up a strong fight against corrosion. Last summer's drought brought them above the river surface for one of the few times since 1862 • This is the same metal that Highland offers you today—Wrought Iron, with the unconquerable resistance to rain, snow, salt air and chemical fumes that has made it the metal of the centuries • Highland men have additional facts regarding the endurance of Wrought Iron and how to use this metal in your business. When may we present facts?

THE HIGHLAND IRON AND STEEL COMPANY
General Sales Office: 400 West Madison St., Chicago
An Associate Company of the American Chain Company, Inc.

Summary of Operations in All Fields for Month of October

SUMMARY OF ALL FIELDS
Wells Completed

	Comp.	Prod.	Dry	Gas
Eastern	136	447	16	32
Lima	15	373	8	4
Central Ohio	36	141	12	15
Indiana	14	200	8	4
Michigan	21	4,812	2	1
Illinois	5	5	3	1
Kentucky	42	1,006	18	2
Mississippi	2	.....	0	2
Kansas	63	13,328	22	4
Oklahoma	136	67,271	45	11
North Central Texas	111	1,679	65	6
West Texas	23	4,526	8	0
Texas Panhandle	14	10,546	3	0
East Cent. and E. Tex.	406	23,988	13	0
Southwest Texas	65	11,099	41	2
Gulf Coast Texas	84	41,995	23	2
North Louisiana	35	5,112	23	3
Gulf Coast Louisiana	19	5,634	10	0
Arkansas	3	27	3	0
Montana	9	545	8	2
Wyoming	3	250	1	0
Colorado	2	.....	1	1
New Mexico	4	994	2	0
Total October	1,246	191,978	336	97
Total September	1,324	185,947	358	69
Difference	78	6,031	22	28

SUMMARY OF ALL FIELDS
Rigs and Wells Drilling

	Rigs	Drlg.	Ttl.
Eastern	42	164	206
Lima	1	27	28
Central Ohio	15	87	102
Indiana	6	71	77
Michigan	55	57	112
Illinois	1	11	12
Kentucky	9	61	70
Mississippi	4	13	17
Alabama	0	1	1
Kansas	45	104	149
Oklahoma	124	347	471
North Central Texas	58	163	221
West Texas	21	106	127
Texas Panhandle	14	57	71
East Cent. and E. Texas.	207	246	453
East Texas gas area	2	26	28
Southwest Texas	41	123	164
Gulf Coast Texas	15	155	170
North Louisiana	61	111	172
Gulf Coast Louisiana	3	28	31
Arkansas	14	28	42
Montana	10	63	73
Wyoming	13	78	91
Colorado	10	73	83
New Mexico	16	54	70
Utah	0	17	17
Total October	786	2,271	3,057
Total September	763	2,315	3,078
Difference	23	44	21

Note—In the following report the Section, Township and Range are given first; then the farm, the owner, the serial number of the well and the initial production of the well. In lines where the Section, Township and Range are missing the wells are located in the Sections, Townships and Ranges which appear next above in the report.

Okahoma Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Atoka	5	4	3	0
Alfalfa	1	0	1	0
Carter	4	853	0	0
Cotton	1	0	0	1
Creek	24	1,340	6	4
Coal	1	0	1	0
Comanche	2	193	0	0
Bryon	1	0	1	0
Grady	1	0	1	0
Hughes	7	1,201	1	0
Jefferson	2	70	0	0
Kay	2	12	0	1
Lincoln	3	1,705	0	0
Marshall	7	5	6	0
Muskogee	11	392	4	2
Pawnee	4	100	3	0
Oklahoma	13	53,708	0	1
Okmulgee	13	112	6	0
Okfuskee	1	37	0	0
Pottawatomie	4	851	1	0
Pontotoc	1	120	0	0
Osage	2	90	1	0
Stephens	6	60	2	0
Seminole	8	6,554	1	0
Tulsa	7	94	4	0
Wagoner	6	60	2	1
Total October	136	67,271	45	11
Total September	117	39,042	55	3
Difference	19	28,239	10	8

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Alfalfa	0	1	1
Atoka	2	14	16
Beckham	0	3	3
Bryan	0	1	1
Blaine	0	1	1
Coal	1	2	3
Creek	17	48	65
Custer	1	0	1
Cherokee	0	1	1
Carter	1	7	8
Caddo	1	5	6
Comanche	0	2	2
Ellis	0	1	1
Garfield	1	2	3
Grant	1	0	1
Grady	1	2	3
Hughes	5	25	30
Haskell	1	3	4
Jefferson	3	3	6
Kay	1	3	4
Kiowa	0	1	1
Latimer	0	1	1
Lincoln	1	3	4
Logan	1	5	6
Marshall	3	8	11
McCurtain	0	1	1
Muskogee	3	10	13
McIntosh	0	1	1
Noble	3	5	8
Oklahoma	31	41	72
Osage	2	9	11
Okmulgee	7	32	39
Okfuskee	2	4	6
Pittsburg	2	2	4
Pushmataha	0	1	1
Pontotoc	6	12	18
Pottawatomie	6	15	21
Pawnee	5	9	14
Payne	1	3	4
Roger Mills	0	2	2
Seminole	1	13	14
Stephens	8	15	23
Tulsa	4	14	18
Texas	0	1	1
Wood	1	0	1
Woodward	0	1	1
Wagoner	1	12	13
Washita	0	2	2
Total October	124	347	471
Total September	127	403	530
Difference	3	56	59

WELLS COMPLETED
ATOKA COUNTY

26-1s-14	Barton 2	dry
2-1s-14	E. B. Croxton 3	dry
26- 1-14	Barton 3	1
35-2s-13	Malarnee 3	3
8-2s-13	Morris 1	dry

Wells completed 5
Production 4
Dry 3

ALFALFA COUNTY

14-24-11w	Bailey et al 1	dry

Wells completed 1
Dry 1

CARTER COUNTY

10-7s-2w	Simpson 7	60
31-1s-2w	Robb et al 2	361
22-4s-3w	Schermerhorn-Ardmore 11	10
31-1s-2w	Noble 2	422

Wells completed 4
Production 853

COTTON COUNTY

32-1s-10w	Pure Oil Co. 3	gas

Wells completed 1
Gas 1
Gas production 750,000

CREEK COUNTY

29-19-9	Johnson O. & R. Co. 4	100
1-18-8	Swift et al 1	20
31-18-9	Dixie Drlg. Co. 5	190
26-18-9	R.B.M. Oil Co. 1	gas
5-17-7	Barger et al 8	8
13-17-10	Whitten & Wilcox 1	dry
9-16-12	S. W. Anthony 4	gas
6-15-7	Pure Oil Co. 1	598
4-14-10	Calvin et al 4	14
28-14-10	Jenkins et al 1	dry
20-19-9	O. M. Ireland 2	15
32-19-9	Gled Oil Co. 1	gas
24-18-10	Carpenter & Dowd 1	2
28-16-12	Smith & Williams 1	20
22-15-8	Billingsley 7	160
27-16-9	Pioneer Pet. Co. 1	dry
5-18-9	Mann et al 1	gas
27-18-8	Merritt et al 4	15
35-19-8	Exchange Drlg. Co. 1	dry
1-19-9	National O. & R. Co. 9	140
7-19-8	Fogle & Marble 1	12
31-19-8	H. Williby 1	dry
30-19-9	Duke & Hughes 1	46
32-19-9	Big Four Pet. Co. 1	dry

Wells completed 24
Production 1340
Dry 6
Gas 4
Gas production 10,750,000

COAL COUNTY

2-1s-8	Radical Oil Co. 1	dry

Wells completed 1
Dry 1

COMANCHE COUNTY

28- 2-1w	Ashcraft & Palmer 1	3
30- 2-9w	Chamberlin 1	100

Wells completed 2
Production 103

BRYAN COUNTY

28-6s-8	Hahnell 1	dry

Wells completed 1
Dry 1

GRADY COUNTY

6- 3-5w	J. Ray 1	dry

Wells completed 1
Dry 1

HUGHES COUNTY

9- 7-8	Mid-Continent Pet. Corp. 1	360
9- 7-8	Mid-Continent Pet. Corp. 2	376
11- 7-8	Genter et al 1	75
14- 7-8	Galbreath et al 1	50
14- 7-8	Southern Oil Co. 1	dry
10- 7-8	Manahan et al 1	261
15- 7-8	Limestone O. & G. Co. 3	80

Wells completed 7
Production 1201
Dry 1

JEFFERSON COUNTY

3-7s-5w	Southern Oil Co. 2	20
34-6s-5w	O. V. Beck 8	50

Wells completed 2
Production 70

KAY COUNTY

9-27-1w	The Texas Company 1	12
30-25-1	Blubaugh et al 1	gas

Wells completed 2
Production 12
Gas 1
Gas production 6,000,000

LINCOLN COUNTY

1-15-6	Gypsy Oil Co. 1	240
1-15-6	H. J. Henry 1	265
1-15-6	Stanolind O. & G. Co. 1	1200

Wells Completed 3
Production 1705

MARSHALL COUNTY

3-7s-6	L.H.R. Co. 1	5
10-7s-5	Southworth-Harvey 1	dry
24-7s-5	McCrory & McCrory 1	dry
11-7s-6	Mid-Co. Service 1	dry
20-7s-6	White O. & G. Co. 1	dry
10-7s-6	Southward & Harvey 1	dry
25-7s-5	C. M. Cornell 2	dry

Wells completed 7
Production 5
Dry 6

MUSKOGEE COUNTY

24-15-17	Simpson et al 3	dry
8-15-18	Foltz et al 2	50
9-15-18	Finefield 2	dry
34-16-15	Mack Drlg. Co. 2	gas
34-16-15	W. B. Pine 1	gas
34-16-15	W. B. Pine 2	gas
5-15-18	Western Drlg. Co. 2	27
5-15-18	Finefield 2	dry
17-15-17	Williams et al 5	15
19-14-16	Ohio Osage Oil Co. 2	dry
33-16-15	Mack Drlg. Co. 8	300

Wells completed 11
Production 392
Dry 4
Gas 3
Gas production 2,450,000

PAWNEE COUNTY

7-20-10	F. E. Harris et al 1	dry
17-21-8	Malarkey et al 12	100
24-22-6	M. P. Tippen 1	dry
20-20-8	Klintworth et al 1	dry

Wells completed 4
Production 100
Dry 3

OKLAHOMA COUNTY

15-11-3w	Phillips Pet. Co. 1, 4 hrs.	351
22-11-3w	Harper & Turner 1, 4 hrs.	1512
27-11-3w	I.T.I.O. 4, 4 hrs.	503
35-11-3w	I.T.I.O. 10, 4 hrs.	969
18-11-3w	Coline Oil Co. 1	gas
3-11-3w	Phillips Pet. Co. 1, 4 hrs.	12,763
3-11-3w	J. E. Shaffer 2, 4 hrs.	7760
22-11-3w	R. Day et al 1, 4 hrs.	3610
3-11-3w	Phillips Pet. Co. 3, 4 hrs.	12,513
15-11-3w	Phillips Pet. Co. 1, 4 hrs.	850
35-12-3w	I.T.I.O. 4, daily	91
3-11-3w	Phillips Pet. Co. 1, 2 hrs.	2578
3-11-3w	Slick-Urschel, Inc., 5, 4 hrs.	10,098

Wells completed 13
Production 53,708
Gas 1
Gas production 10,000,000

OKMULGEE COUNTY

17-14-13	Curtis Oil Co. 1	dry
15-13-13	J. H. Rebold et al 1	dry
5-13-14	Mid-Western O. & G. Co. 1	dry
23-14-14	Castleman 7	dry
21-14-14	G. A. Simmons 3	10
20-14-13	Christian et al 1	dry
14-14-14	Denton & Marshall 2	35
14-14-14	Wallace 8	15
35-14-14	J. L. Selby 35	4
4-13-13	Buckingham & Peal 1	18
6-13-11	Vincent 1	dry
33-14-14	Coyle et al 6	30

Wells completed 12
Production 112
Dry 6

OKFUSKEE COUNTY

25-10-10	Schook-Phillips Pet. Co. 1	37

Wells completed 1
Production 37

POTTAWATOMIE COUNTY

25- 7-4	Gypsy Oil Co. 1	79
25- 6-4	Gypsy Oil Co. 1	412
6- 6-5	Mid-Continent Pet. Corp. 1	160
10- 7-4	Phillips Pet. Co. 1	dry

Wells completed 4
Production 651
Dry 1

PONTOTOC COUNTY

32- 5-5	Superior Oil Co. 4	120

Wells completed 1
Production 120

OSAGE COUNTY

27-24-7	Lewis Prod. Co. 1	90
11-23-7	Johnson O. & R. Co. 1	dry

Wells completed 2
Production 90
Dry 1

STEPHENS COUNTY

21-2s-7w	G. Pace 2	30
6-3s-5w	J. Ray 1	dry
26-2s-7w	G. Pace 2	dry
1-2s-8w	G. Pace 3	dry
1-2s-8w	Boyle et al 1	10
2-2s-8w	Chambers 5	20

Wells completed 6
Production 60
Dry 3

SEMINOLE COUNTY

20- 9-6	Phillips Pet. Co. 5	772
29- 9-6	Amerada Pet. Corp. 6	1742
29- 9-6	The Texas Company 4	1220
19- 9-6	Prod. & Ref. Corp. 2	25
20- 9-6	Carter Oil Co. 7	487
32- 5-6	Patrick Drlg. Co. 1	dry
29- 9-6	Amerada Pet. Corp. et al 4	2,035
20- 9-6	Carter Oil Co. 8	273

Wells completed 6
Production 6554
Dry 1

TULSA COUNTY

13-16-13	Aggis Drlg. Co. 2	15
1-17-13	A. J. Pettus 1	dry
23-18-14	Boyd et al	dry
12-18-12	Meyers et al 1	75
20-19-12	Short et al 1	4
20-19-12	Buckcreek Oil Co. 13	dry
32-19-12	P. Short 2	dry

Wells completed 7
Production 94
Dry 4

WAGONER COUNTY

22-18-15	Lambert and King 1	dry
7-16-17	C. D. Bradley 1	dry
7-16-17	E. Mills 1	gas
30-17-17	Metzger and Foltz 4	15
36-18-15	Flannigan et al 2	20
15-18-15	Edwards et al 1	25

Wells completed 6
Production 60
Dry 2
Gas 1
Gas production 1,000,000

Kansas Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Butler	2	80	1	0
Chase	1	0	1	0
Cowley	7	500	3	0
Coffey	1	0	1	0
Douglass	1	0	1	0
Ellsworth	2	0	1	1
Finney	1	0	1	0
Greenwood	12	513	4	0
Harvey	3	3,465	0	0
McPherson	21	7,110	4	2
Leavenworth	1	0	1	0
Rice	2	295	0	0
Reno	2	550	1	0
Sedgwick	4	650	2	1
Woodson	1	165	0	0
Rush	1	0	1	0
Total October	63	13,328	22	4
Total September	54	11,462	14	2
Difference	9	1,866	8	2

Summary of Rigs and Wells Drilling

County—	Rigs	Drlg.	Ttl.
Butler	0	2	2
Barton	2	4	6
Cowley	5	16	21
Douglass	0	1	1
Ellsworth	2	7	9
Edwards	0	1	1
Finney	1	0	1
Ford	0	1	1
Greenwood	2	3	5
Graham	0	1	1
Harvey	4	5	9
Haskell	1	0	1
Kingman	0	2	2
McPherson	19	34	53
Pratt	0	1	1
Reno	2	4	6
Rice	3	5	8
Rush	0	2	2
Russell	3	1	4
Sedgwick	0	10	10
Sumner	1	1	2
Stafford	0	1	1
Sheridan	0	1	1
Trego	0	1	1
Total October	45	104	149
Total September	35	101	136
Difference	10	3	13

WELLS COMPLETED
BUTLER COUNTY

19-26-5	Empire O. & R. Co. 1	80
36-26-5	H. Garden et al 1	dry

Wells completed 2
Production 80
Dry 1

CHASE COUNTY

23-22-9	Leader et al 1	dry

Wells completed 1
Dry 1

COWLEY COUNTY

27-32-4	Murphy et al 2	52
22-32-4	Roth & Farout 2	20
29-28-12	Denton et al 1	dry
11-32-4	McNabb et al 1	188
22-32-4	Deal O. & G. Co. 1	200
27-32-4	McCole et al 1	dry
6-30-6	Roth & Farout 1	dry

Wells completed 7
Production 500
Dry 3

COFFEY COUNTY

31-12-14	A. F. Baker 1	dry

Wells completed 1
Dry 1

DOUGLASS COUNTY

31-14-19	Pure Oil Co. 1	dry

Wells completed 1
Dry 1

FINNEY COUNTY

13-23-30w	National Ref. Co. 1	dry

Wells completed 1
Dry 1

ELLSWORTH COUNTY

5-14-9w Viking Oil Co. 1 ..... gas
5-17-8w Morgan et al 1 ..... dry

Wells completed 2
Dry 1
Gas 1
Gas production 750,000

GREENWOOD COUNTY

17-24-12 Hubbard et al 1 75
8-22-11 Davidson et al 1 ..... dry
33-22-12 Theta O. & G. Co. 11 80
18-24-11 Ward McGinnis 1 ..... dry
6-24-12 Sinclair Prairie Oil Co. 2 20
7-24-12 Mathews & Rex 1 125
8-24-12 Frasier et al 1 100
33-22-12 Theta O. & G. Co. 9 10
35-23-11 Gore et al 3 ..... dry
26-23-12 Sheady et al 5 3
8-24-12 Landon et al 4 100
8-24-12 Landon et al 5 ..... dry

Wells completed 12
Production 513
Dry 4

HARVEY COUNTY

20-22-3w McBride, Inc., 3 1632
20-22-3w Phillips Pet. Co. 1 1033
19-22-3w F. Hollow 1 800

Wells completed 3
Production 3465

McPHERSON COUNTY

20-19-1w Darby Pet. Corp. 3 ..... dry
21-19-1w Smith & Ash 1 65
21-21-3w Derby Oil Co. 2 80
6-20-1w Marleen et al 3 818
21-19-1w Shell Pet. Corp. 1 ..... gas
5-20-1w Foraker et al 1 ..... dry
1-20-2w Lario O. & G. Co. 1 ..... dry
34-20-3w Slick et al 1 80
35-19-3w Barnsdall Oil Co. 1 1440
35-19-3w Shell Pet. Corp. 2 135
26-19-2w Derby Oil Co. et al 3 516
35-19-2w Rosespring Drlg. Co. et al 2.. 1686
18-19-1w Phillips Pet. Co. 2 726
23-19-2w Lario O. & G. Co. 1 200
24-19-2w Lario O. & G. Co. 3 124
24-19-2w Youker et al 2 100
19-19-1w Boyle et al 12 840
16-19-1 Detrich et al 1 ..... dry
29-21-3w McBride, Inc., 1 300
2-20-3w Mid-Kansas O. & G. Co. 2 ... gas
29-19-1w United Pet. Co. et al 1 270

Wells completed 21
Production 7110
Dry 4
Gas 2
Gas production 76,750,000

LEAVENWORTH COUNTY

32-10-21 West et al 1 ..... dry

Wells completed 1
Dry 1

RICE COUNTY

2-21-6w Hipple and Liggett 1 125
16-19-9w National Ref. Co. 1 160

Wells completed 2
Production 285

RENO COUNTY

25-23-4w Oleson Oil Co. et al 1 550
15-23-5w Martin et al 1 ..... dry

Wells completed 2
Production 550
Dry 1

SEDGWICK COUNTY

15-25-1 Continental Oil Co. 2 ..... dry
27-27-1 Old Trails Oil Co. 1 ..... gas
15-26-2 Shell Pet. Corp. 5 650
35-27-1 Scroggins et al 1 ..... dry

Wells completed 4
Production 650
Dry 2
Gas 1
Gas production 2,500,000

WOODSON COUNTY

31-23-14 Nye & Kelly 2 165

Wells completed 1
Production 165

RUSH COUNTY

3-19-16w Barnsdall Oil Co. 1 ..... dry
Wells completed 1
Dry 1

East Texas Fields

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rgs.	Dlg.	Ttl.
Anderson	1	0	1	0	0	1	1
Angelina	0	0	0	0	0	2	2
Bowie	1	0	1	0	0	2	2
Cherokee	5	152	3	0	5	3	8
Delta	0	0	0	0	0	2	2
Ellis	0	0	0	0	0	5	5
Franklin	0	0	0	0	0	2	2
Freestone	0	0	0	0	0	1	1
Gregg	193	11,805	3	0	84	73	157
Henderson	1	0	1	0	0	3	3
Hill	1	0	1	0	0	1	1
Hopkins	0	0	0	0	1	3	4
Hunt	0	0	0	0	1	0	1
Kaufman	0	0	0	0	0	3	3
Lamar	1	0	1	0	0	1	1
Leon	0	0	0	0	0	3	3
Morris	0	0	0	0	2	1	3
Rains	1	0	1	0	0	0	0
Red River	0	0	0	0	0	1	1
Rockwall	0	0	0	0	0	1	1
Rusk	146	7,779	0	0	83	92	175
Smith	21	1,514	0	0	15	11	26
Upshur	25	1,546	1	0	11	20	31
Van Zandt	10	1,192	0	0	4	11	15
Wood	0	0	0	0	1	4	5
Ttl. Oct.	406	23,988	13	0	207	246	453
Ttl. Sept.	437	26,820	14	1	217	272	489
Difference	31	2,832	1	1	10	26	36

ANDERSON COUNTY
WELLS COMPLETED

Frazier et al's No. 1 H. L. Hudson ..... abd

Wells completed 1
Abandoned 1

BOWIE COUNTY

Burnham-Robertson and Greer's No. 1 F. O. Weiss ..... abd

Wells completed 1
Abandoned 1

CHEROKEE COUNTY

Mid-Kansas Oil & Gas Co.'s No. 6 H. K. Kelley, 2-in. lead 32
Sheron Pet. Co.'s No. 1-A Eddie Toole .. abd
Marr Drilling Co. and Stanolind Oil & Gas Co.'s No. 1 Green ..... abd
Pure Oil Co.'s No. 1 W. B. Nichols .... abd
Mid-Kansas Oil & Gas Co.'s No. 5 H. D. Kelley, 2-in. lead 70

Wells completed 5
Initial production 152
Abandoned 3

GREGG COUNTY

Atlantic Oil & Prod. Co.'s No. 7 McBee Fisher, tapered tubing 64
Atlantic Oil & Prod. Co.'s No. 26 J. Moore, tapered tubing 64
Atlantic Oil & Prod. Co.'s No. 27 J. Moore, tapered tubing 64
Atlantic Oil & Prod. Co.'s No. 12 Turner, tapered tubing 64
Atlantic and Stanolind Oil & Gas Co.'s No. 6 S. C. Fishburn, tapered tubing . 64
Brown Eagle Oil Co.'s No. 4 T.&P.R.R., 1-in. tubing choke, ¼ hr. 37
Columbia Oil & Gas Co.'s No. 4 A. Christian, tapered tubing, ½ hr. 20
Columbia Oil & Gas Co.'s No. 6-A Doby, tapered tubing 65
East Texas Ref. Co.'s No. 5 W. J. and G. Hindman, tapered tubing, 45 min. 46
Humble Oil & Ref. Co.'s No. 4 L. Christian, ⅝-in. tubing choke 93
Humble Oil & Ref. Co.'s No. 6 M. Wells, ⅝-in. tubing choke 82
Rose V. Glasscock's No. 1 T. B. Harris, 1-in. tubing choke, ¼ hr. 40
J. E. Mabee's No. 2 Whitehurst, ⅝-in. tubing choke 60
Magnolia Pet. Co.'s No. 6 Todd-Stinchcomb, 2-in. tubing 110
Magnolia Pet. Co.'s No. 7 Todd-Stinchcomb, 2-in. tubing 104
Marine Prod. Co.'s No. 4 York, 1-in. open tubing 75
Reddick and Hugus' No. 2 S. G. Smith, open 2-in. tubing, ½ hr. 72
Sun Oil Co.'s No. 4 J. N. Campbell, open 2-in. tubing 107
Sun Oil Co.'s No. 6 J. N. Campbell, tapered tubing 50
The Texas Co.'s No. 5 Clark, 1-in. tubing choke 91
Tidal Oil Co.'s No. 17 Lake Devernia, 2-in. tubing, 10 min. 21
Wise and Jackson's No. 4 R. Corbin, 1-in. tubing choke 75
Yount Lee Oil Co.'s No. 3-B I. Denson, 11/16-in. tubing choke 68
Yount Lee Oil Co.'s No. 1 T. W. Lee, 11/16-in. tubing choke 63
Yount Lee Oil Co.'s No. 4-B S. G. Smith, 11/16-in. tubing choke 74
Yount Lee Oil Co.'s No. 5-C M. Smith, 11/16-in. tubing choke 75
F. A. Bates' No. 4 M. T. Cole, open tubing 50
Blue Star Oil Co.'s No. 6-B Sabine River, ⅝-in. tubing choke 78
Champlin and Bass' No. 4 Watson, ⅝-in. tubing choke 75
F. E. Flannery et al's No. 1 M. T. Cole, ⅝-in. tubing choke 75
Gulf Prod. Co.'s No. 43 Hilburn, ⅝-in. tubing choke 83
Island Oil Co.'s No. 1 M. J. Register, ⅝-in. tubing choke 75
M. Spalding's No. 1 W. P. Crews, open tubing 85
Lion Oil & Ref. Co.'s No. 4 A. King, open tubing 65
M. W. McVery's No. 1 Roy Laird, open tubing 50
Mead Oil Co.'s No. 3 L.&G.N.R.R., ⅝-in. tubing choke 50
Producers Investment Co.'s No. 3 W. N. Crim, 2½-in. tubing choke 75
E. J. Raddatz' No. 2 Sabine River, Tract No. 5, 1-in. tubing choke, ¼ hr. 30
H. R. Smith's No. 4 B. Grey, ⅝-in. tubing choke 75
Heyser and Heard's No. 1 M. Strong, ½-inch. tubing choke, by heads 8
Sun Oil Co.'s No. 13 M. T. Cole, tapered tubing 50
Sun Oil Co.'s No. 3 Joe Rollins, tapered tubing 51
The Texas Co.'s No. 8 H. T. Elder, open tubing 85
Tidal Oil Co.'s No. 11 Bivens, open tubing, 5 min. 10
Tidal Oil Co.'s No. 10 J. S. King, open tubing, 10 min. 21
Atlantic Oil & Prod. Co.'s No. 11 Duncan, tapered tubing 65
Galves Oil Co.'s No. 3 M. O. Sheppard, ⅝-in. tubing 75
Hartwell and Geisler's No. 1 fee, open tubing, 20 min. 35
Gulf Prod. Co.'s No. 21 M. O. Sheppard, ⅝-in. tubing choke 90
A. R. Hancock's No. 1 Brawley, open 2-in. tubing, ¼ hr. 38
Humble Oil & Ref. Co.'s No. 7 Boles, ⅝-in. tubing, ¼ hr. 24
Humble Oil & Ref. Co.'s No. 1 J. P. Owens ..... abd
Island Oil Co.'s No. 2-B M. Finn, 2-in. tubing 150
Island Oil Co.'s No. 2 J. W. Akin, open 2-in. tubing, ¼ hr. 40
Kewanee Oil & Gas Co.'s No. 12 fee, 1-in. tubing choke, ¼ hr. 25
J. F. Lucey, Receiver, No. 12 fee, open 2-in. tubing, ¼ hr. 40
Selby Oil & Gas Co.'s No. 5 A. Miller, ¼ hr., open 2-in. tubing 23
Simms Oil Co.'s No. 4 A. Christian, 2½-in. open tubing 180
Simms and Russ' No. 8 J. J. Flewellen, 2½-in. open tubing 140
The Texas Co.'s No. 4 Phillips, 2-in. tubing 90
Chapman Thomas et al's No. 1 J. H. Gage, 2-in. tubing 83
Tidal Oil Co.'s No. 20 Lake Devernia, open 2-in. tubing, 10 min. 21
Dr. E. L. Walker's No. 1 fee, 2-in. tubing, ½ hr. 46
Yount Lee Oil Co.'s No. 4 Annie Lee, 11/16-in. tubing choke 60
Yount Lee Oil Co.'s No. 6 C. M. Smith, 11/16-in. tubing 75
Angle and Kuykendall's No. 1 John Curnigan, ⅝-in. tubing choke 73
Atlantic Oil & Prod. Co.'s No. 8-A Andrews, tapered tubing 65
Blue Star Oil Co.'s No. 6-A Sabine River Tract No. 6, ⅝-in. tubing. 75
Blue Star Oil Co.'s No. 7-J Sabine River, tract No. 7, open tubing, ¼ hr. 40
Blue Star Oil Co.'s No. 7-K Sabine River, open tubing, ¼ hr. 40
Gulf Prod. Co.'s No. 15 G. Brown, ⅝-in. tubing choke 85
Gulf Prod. Co.'s No. 3 S. B. Hall, ⅝-in. tubing choke 70
Gulf Prod. Co.'s No. 4 Nichols, ⅝-in. tubing choke 43
Hensley and Dutton's No. 1 Howard, open casing 120
Jones and O'Brien's No. 8 Hughey-Ross, 1-in. tubing choke 75
William C. Holcomb's No. 1 S. Smith, ⅝-in. tubing choke 75
Navarro Oil Co.'s No. 4 Green, 1-in. tubing choke 45
Pelican Natural Gas Co.'s No. 6 A. Spear and Laird, ⅝-in. tubing 75
Porter and Badgett's No. 1 School Lot, ⅝-in. tubing choke 75
Thoads Drilling Co.'s No. 3 Sabine River, open tubing, ½ hr. 50
J. J. Roberts' No. 1 J. S. and F. Elder, pumping 9
Russell Pet. Co.'s No. 1-B A. A. King .. abd
Shell Pet. Corp.'s No. 3 M. J. Register, open tubing, ½ hr. 15
Sinclair Prairie Oil Co.'s No. 32 M. T. Cole, open tubing 25
Sinclair Prairie Oil Co.'s No. 7 John Elder, open tubing, 10 min. 35
Sinclair Prairie Oil Co.'s No. 10 J. E. Lawther, open tubing 60
Amerada Pet. Co.'s No. 6 A. Tooke, 1-in. tubing, ½ hr. 19
Atlantic Oil & Prod. Co.'s No. 9 H. Pritchard, tapered tubing 64
Atlantic and Sun Oil Co.'s No. 30 M. Hays, tapered tubing 65
Atlantic and Sun Oil Co.'s No. 31 M. Hays, tapered tubing 54
Groveman and Dorian No. 1 Rucker, 1-in. tubing choke 120
East Texas Ref. Co.'s No. 3 Fisher, open 2-in. tubing 50
F. & M. Drilling Co.'s No. 4-A Blackstone, open 2-in. tubing 45
Howe's No. 35-B J. C. Judge, tapered tubing 65
Humble Oil & Ref. Co.'s No. 5 L. Christian, ⅝-in. tubing 62
Humble Oil & Ref. Co.'s No. 5 G. W. Willingham, ⅝-in. tubing 53
Lechner and Hubbard's No. 1 N. Tuttle, open 2-in. tubing, ¼ hr. 32
Lester and Duffield's No. 1 J. Moore, open 2-in. tubing, ¼ hr. 45
Magnolia Pet. Co.'s No. 5 Allen, open 2-in. tubing 112
Magnolia Pet. Co.'s No. 4 G. W. Tate, open tubing 110
Magnolia Pet. Co.'s No. 8 H. B. Zeigler, open 2-in. tubing 130
Massie et al's No. 6 M. Fenn, 1-in. tubing, ½ hr. 40
H. S. Moss et al's No. 3 G. B. Tenery, open 2½-in. tubing, 20 min. 48
E. A. Payne et al's No. 1 R. M. Woods, 1½-in. tubing choke 110
Pilot Oil Co.'s No. 9 T. B. Harris, open 2-in. tubing, 20 min. 45
Roeser and Pendleton's No. 5-B Nicholson, 2-in. tubing 100
Roeser and Pendleton's No. 3-A Satterwhite, ⅝-in. tubing, ½ hr. 45
Shell Pet. Corp.'s No. 7 S. C. Fishburn, tapered tubing 25
Stroube and Stroube's No. 2 Anderson, tapered tubing 25
Sun Oil Co.'s No. 11 J. W. Akin, tapered tubing 37
Sun Oil Co.'s No. 7 J. N. Campbell, open 2-in. tubing 95
Superior Oil Co.'s No. 8-A Pritchard, open 2½-in. tubing, 13 min. 45
The Texas Co.'s No. 6 Clark, 1-in. tubing choke 92
Tidal Oil Co.'s No. 14 J. Castleberry ... abd
Yount Lee Oil Co.'s No. 6-A I. Denson, 11/16-in. tubing choke 68
Yount Lee Oil Co.'s No. 6 F. Smith, 11/16-in. tubing choke 73
Atlantic Oil & Prod. Co.'s No. 9-A Andrews, tapered tubing 65
Atlantic Oil & Prod. Co.'s No. 7 Whaley, tapered tubing 65
Barnsdall Oil Co.'s No. 4 J. Douglas, ⅝-in. tubing choke 105
Blue Star Oil Co.'s No. 3-H Sabine River, ⅝-in. tubing choke 75
Blue Star Oil Co.'s No. 6-H Sabine River, ⅝-in. tubing choke 75
Carroll and Blaine's No. 1 A. King, ⅝-in. tubing choke 50
L. C. Collins' No. 3-B Bivens, open tubing, ½ hr. 45
Droppleman Development Co.'s No. 2 Lula Martin, open tubing, ½ hr. 45
Dr. Duncan's No. 2 Duncan, ⅝-in. tubing choke 70
Burk Royalty Co.'s No. 2 D. Carr, ⅝-in. tubing choke 65
Gulf Prod. Co.'s No. 46 Hilburn estate, ⅝-in. tubing choke 64
Gulf Prod. Co.'s No. 15 W. Holt, ⅝-in. tubing choke 70
Titan Oil Co.'s No. 1 C. Dickson, 24 hrs. 400
T. D. Humphrey's No. 8 A. Spear .. no gauge
Island Oil Co.'s No. 4 Register, ⅝-in. tubing choke 70
John Mabee's No. 3 M. T. Cole, ⅝-in. tubing choke 80
John Mabee's No. 4 M. T. Cole, open tubing, ¼ hr. 40
E .J. Raddatz' No. 3 Sabine River, open tubing, ½ hr. 30
Russel Pet. Co.'s No. 2 M. T. Cole, ⅝-in. tubing choke, 5½ hr.s 105
Shell Pet. Corp.'s No. 3 J. S. Elder, open tapered tubing, ½ hr. 13
Shell Pet. Corp.'s No. 3-A B. F. Laird, tapered tubing, ½ hr. 15
Shell Pet. Corp.'s No. 4 M. J. Register, tapered tubing, ½ hr. 15
Sinclair Prairie Oil Co.'s No. 30 M. T. Cole, open tubing, 2 hrs. 44
The Texas Co.'s No. 7 W. Davis, open tubing 105
Tidal Oil Co.'s No. 12 M. G. Barton, open tubing, 10 min. 20
Tidal Oil Co.'s No. 9 C. G. Strong, 2-in. line, 5 min. 18
Whittle and Cavanaugh's No. 3 Watson, ⅝-in. tubing choke, 21 min. 44
Amerada Pet. Corp.'s No. 6 Continental State Bank, ⅝-in. tubing 58
Atlantic Oil & Prod. Co.'s No. 10 J. Bander, tapered tubing 64
W. E. Barker et al's No. 1 Richey, ⅝-in. tubing choke 75
Barnsdall Oil Co.'s No. 6 R. L. Ferguson, 1-in. tubing choke 133
Barnsdall Oil Co.'s No. 8 C. W. Bingham, 1-in. tubing choke 137
Columbia Oil & Gas Co.'s No. 1 G. A. Castleberry, open tubing 50
East Texas Ref. Co.'s No. 4 P. C. Castleberry, ½ hr. 30
Gulf Prod. Co.'s No. 10 A. V. Bacle, ⅝-inch tubing choke 60
Gulf Prod. Co.'s No. 9-B J. H. Boseman, ⅝-in. tubing choke 76
Humble Oil & Ref. Co.'s No. 16 W. R. Hughes, ⅝-in. tubing choke 59
Humble Oil & Ref. Co.'s No. 17 W. R. Hughes, ⅝-in. tubing choke, ½ hr.... 17
Humble Oil & Ref. Co.'s No. 8 H. M. Lawrence, ⅝-in. tubing, ¼ hr. 21
Kewanee Oil & Gas Co.'s No. 13 fee, 1-in. tubing choke, ¼ hr. 40
Magnolia Pet. Co.'s No. 2 W. R. Hughes, open 2-in. tubing 140
Magnolia Pet. Co.'s No. 6 O. F. Smith, open 2-in. tubing 120
Magnolia Pet. Co.'s No. 4 I. Zeigler, open 2-in. tubing 82
O. G. Murphy's No. 6 J. B. Doby, 2-in. tubing, ½ hr. 60
New Process Oil Co.'s No. 3 Anderson, open 2-in. tubing 110
Republic Prod. Co.'s No. 5 C. Fisher, 1-in. tubing, 10 min. 15
Selby Oil & Gas Co.'s No. 6-A Snavely heirs, 2-in. tubing ¼ hr. 31
Shano Oil Co.'s No. 3 S. G. Smith, ⅝-in. tubing choke 65
Shell Pet. Corp.'s No. 12 Burnside, tapered tubing, ½ hr. 15
Shell Pet. Corp.'s No. 5 H. Hampton, tapered tubing, ½ hr. 15
Shell Pet. Corp.'s No. 3 O. Lockhart, tapered tubing, ½ hr. 15
Sehil Pet. Corp.'s No. 11 Richey, tapered tubing, ½ hr. 17
Stanolind and Simms et al's No. 6-C J. J. Flewellen, 2½-in. tubing choke, ¼ hr. 22
Sun Oil Co.'s No. 14 Haynes, tapered tubing 27
The Texas Co.'s No. 8 T. W. Lee, open 2-in. tubing 127
Tidal Oil Co.'s No. 11 Lake Devernia, open 2-in. tubing, 10 min. 21
Tidal Oil Co.'s No. 9 Nettleton, open 2-in. tubing, 10 min. 17
Tidal Oil Co.'s No. 8 J. H. Sheppard, open 2-in. tubing, ½ hr. 26
Yount Lee Oil Co.'s No. 5-C Lathrop, open 2½-in. tubing 10
Yount Lee Oil Co.'s No. 5-C McKinley, 11/16-in. tubing choke 78
Yount Lee Oil Co.'s No. 6-C McKinley, 11/16-in. tubing choke 81
Yount Lee Oil Co.'s No. 7-C Smith, 11/16-in. tubing choke 75
Blue Star Oil Co.'s No. 3-G Sabine River, ⅝-in. tubing choke 65
Blue Star Oil Co.'s No. 7-G Sabine River (tract No. 7), open 2½-in. tubing, ¼ hr. 45
Central Com. Oil Co.'s No. 4 A. A. King, open 2-in. tubing 104
East Whaley Oil Co.'s No. 1 Elder, open 2-in. tubing 45
Burk Royalty Co.'s No. 2-B D. Carr, open 2-in. tubing 100
Gulf Prod. Co.'s No. 5 A. A. King, open 2-in. tubing 20
Gulf Prod. Co.'s No. 6 Nichols, ⅝-in. tubing choke 55
Humble Oil & Ref. Co.'s No. 10 Dora Thomas, ⅝-in. tubing 40
T. A. Johnston and J. Owen's No. 2-A M. T. Cole, open 2-in. tubing, ¼ hr... 35
Magnolia Pet. Corp.'s No. 5 N. Radford, open 2-in. tubing 112
Rhoads Drilling Co.'s No. 4 Sabine River, open 2-in. tubing, ½ hr. 50
Shell Pet. Corp.'s No. 9-A B. F. Laird, tapered tubing, ½ hr. 16
H. R. Smith, Inc.'s No. 5 Gray, open 2-in. tubing, 45 min. 60
Sun Oil Co.'s No. 6 M. Strong, tapered tubing 51

Wells completed 193
Initial production 11,805
Abandoned 3

HENDERSON COUNTY

G. W. Murchinson et al's No. 1 S. G. Benton ..... abd

Wells completed 1
Abandoned 1

HILL COUNTY

C. Houseman's No. 1 J. F. Griffith .... abd

Wells completed 1
Abandoned 1

LAMAR COUNTY

Davy et al's No. 1 McGustian ..... abd

Wells completed 1
Abandoned 1

RAINS COUNTY

Harris et al's No. 1 Markovits ..... abd

Wells completed 1
Abandoned 1

RUSK COUNTY

East Texas Ref. Co.'s No. 3 Andy Given, ⅝-in. tubing choke 46
Humble Oil & Ref. Co.'s No. 4 W. D. Peterson, ⅝-in. tubing 48
Jackson et al's No. 2 M. D. Williamson, open 2-in. tubing, 50 min. 46
Magnolia Pet. Co.'s No. 4 N. Bean, 1-in. tubing choke 22
Murray Oil Co.'s No. 1 V. H. Barton, open tubing 75
Amerada Pet. Corp.'s No. 15 Sowell, ⅝-in. tubing choke 54
Ebony Oil Co.'s No. 4 Deason, open 2-in. tubing, ½ hr. 25
Gulf Prod. Co.'s No. 4 W. P. Keeling, open tubing 90
H. H. Howell's No. 2 Gus Johnson, open 2-in. tubing 90
Humble Oil & Ref. Co.'s No. 4 Lula Barton, ⅝-in. tubing choke, ½ hr. 33
Humble Oil & Ref. Co.'s No. 4 Sol Dennis, ⅝-in. tubing 70
Humble Oil & Ref. Co.'s No. 8 Charles, ⅝-in. tubing, ½ hr. 22
Humble Oil & Ref. Co.'s No. 8-B R. E. L. Silvey, ⅝-in. tubing 10
Lucey Pet. Co.'s No. 3-B Maxwell, 1-in. tubing choke 46
Merrick Drilling Co.'s No. 2 Nell Cooper, open tubing 18
Mid-Kansas Oil & Gas Co.'s No. 42 M. M. Cross, 2-in. lead 96
Mid-Kansas Oil & Gas Co.'s No. 7 M. G. DeQuerin, 2-in. lead 64
Mid-Kansas Oil & Gas Co.'s No. 2 Kangerga, 2-in. lead 96
Perry-Wood and Boller's No. 5 E. Thrash, 2½-in. tubing choke, ½ hr. 75
Pointer and Duncan's No. 1 Hale, open 2-in. tubing 30
George Ray's No. 4 Pinkston, open 2-in. tubing, ½ hr. 50
Sinclair Prairie Oil Co.'s No. 9-B Peter Tipps, open 2½-in. tubing, ¼ hr. .. 26
Stanolind and Pure Oil Co.'s No. 34 W. H. Siler, open 2½-in. tubing, ½ hr.. 46
Stoddard and Delaney's No. 3 Pinkston, open 2-in. tubing, ½ hr. 45
Summitt Drilling Co.'s No. 8 Mayfield, open 2-in. tubing, ½ hr. 30
The Texas Co.'s No. 2 W. Henry, open tubing 52
The Texas Co.'s No. 7 Allen Kersh, open tubing 80
Tidal Oil Co.'s No. 6 J. M. Shaw, open 2-in. tubing, ¼ hr. 25
Venerable and McClanahan's No. 10 Birdwell, open 2½-in. tubing, ½ hr... 45
East Texas Ref. Co.'s No. 9 D. Wills, tapered tubing 43
East Texas Ref. Co.'s No. 2 L. Morse, open tubing, ½ hr. 80
Gulf Prod. Co.'s No. 5 Sexton estate, ⅝-in. tubing choke 42
Gulf Prod. Co.'s No. 4 M. R. Terrell, ⅝-in. tubing choke 42
Humble Oil & Ref. Co.'s No. 60 L. D. Crim, ⅝-in. tubing choke 90
Humble Oil & Ref. Co.'s No. 61 L. D. Crim, ⅝-in. tubing choke 90
Humble Oil & Ref. Co.'s No. 17-B S. S. Laird, open tubing 24
Humble Oil & Ref. Co.'s No. 4 J. Wooley, ⅝-in. tubing choke 75
Lewis Prod. Co. and Selby Oil & Gas Co.'s No. 6 L. C. Fegues, open 2-in. tubing, ¼ hr. 40
Ruebin and Nadel's No. 2 D. Wills, open casing, ½ hr. 72
Smith and Bohlson's No. 2 Terrell, open tubing, ½ hr. 30
Clin Wood Drilling Co.'s No. 1 Scroggins, ⅝-in. tubing choke, ½ hr. 45
Beard and Hammond's No. 3 W. P. Leeling, open 2-in. tubing, 25 min. ... 40
C. & P. Oil Co.'s No. 5 Giles, 2½-in. open tubing, 20 min. 120
Demonstrand Oil Corp.'s No. 4 L. J. Pinkston, open 2½-in. tubing, ½ hr.. 30
F. H. E. Oil Corp. et al's No. 2-D Thompson, open 2½-in. tubing, ½ hr.. 46
Golding and Murchinson's No. 21 Ida L. Kinney, open 2½-in. tubing 65
Golding and Murchinson's No. 2-B Strickland, open 2½-in. tubing 30
Haynes Drilling Co.'s No. 6 Brown, open 2½-in. tubing 61
Humble Oil & Ref. Co.'s No. 3 J. E. Arnold, ⅝-in. tubing choke 32
Humble Oil & Ref. Co.'s No. 3 B. J. Bagwell, ⅝-in. tubing choke, ½ hr.... 16
Humble Oil & Ref. Co.'s No. 8 J. R. Box, ⅝-in. tubing, ¼ hr. 19
Humble Oil & Ref. Co.'s No. 23 W. L. Price, ⅝-in. tubing, ¼ hr. 15
Humble Oil & Ref. Co.'s No. 10-A R. E. L. Silvey, ⅝-in. tubing 60
Humble Oil & Ref. Co.'s No. 11 J. E. Wheelis, ⅝-in. tubing, ½ hr. 36
Hunt Prod. Co.'s No. 5-D Bradford, 4 hrs. pumping 46
Hunt Prod. Co.'s No. 3-D Fair, 2-in. open tubing, ½ hr. 37
Hunt Prod. Co.'s No. 3 A. P. Finney, open 2-in. tubing, 35 min. 46
Hunt Prod. Co.'s No. 9 C. Young, open 2-in. tubing, ¼ hr. 20
Magnolia Pet. Co.'s No. 2 W. P. Key, open 2½-in. tubing, 50 min. 70
Mid-Kansas Oil & Gas Co.'s No. 24 W. T. Grissom, 2-in. lead 96
Mid-Kansas Oil & Gas Co.'s No. 13 E. E. Moores, 2-in. lead 64
Mid-Kansas Oil & Gas Co.'s No. 10 M. A. Price, 2-in. lead 64
Mid-Kansas Oil & Gas Co.'s No. 2 Peter Tipps, 2-in. lead 88
Richard and Watkins' No. 1 W. F. Neal, open 2-in. tubing 30
Sinclair Prairie Oil Co.'s No. 15 D. Ledbetter, open 2½-in. tubing, ¼ hr. 32
Sinclair Prairie Oil Co.'s No. 8 Peter Tipps, 2½-in. tubing 90
Spansco Oil Co.'s No. 4 W. P. Brett, 2½-in. tubing 65
Stanolind and Pure Oil Co.'s No. 25 W. H. Siler, 2½-in. tubing, 45 min. .. . 46
Stanolind and Pure Oil Co.'s No. 28 W. H. Siler, 36 min. open tubing 46
Sun Oil Co.'s No. 2 Alf Lee, tapered tubing 55
The Texas Co.'s No. 6 Kersh, open 2-in. tubing 80
The Texas Co.'s No. 7 J. M. Prince, open 2-in. tubing 80
Ward Oil Co.'s No. 5 A. P. Finney, open 2-in. tubing 58
Barnsdall Oil Co.'s No. 1 Gill, open 2-in. tubing, 26 min. 50
Humble Oil & Ref. Co.'s No. 19-B S. S. Laird, ⅝-in. tubing 42
Humble Oil & Ref. Co.'s No. 2 O. Robinson, swabbing, 8 hrs. 11
Humble Oil & Ref. Co.'s No. 3 J. Wooley, ⅝-in. tubing 49
Selby and Lewis' No. 2 D. Peterson, ⅝-in. tubing choke, ½ hr. 45
American Liberty Oil Co.'s No. 14 Kinney, open 2-in. tubing 60
American Liberty Oil Co.'s No. 5-A Pinkston, open 2-in. tubing 90
Beard and Hammond's No. 4 Keeling, ⅝-in. tubing choke, 10 min. 20
Gilcrease Oil Co.'s No. 3 Bradford, open 2½-in. tubing, ½ hr. 40
Goodnight-Donald Oil Co.'s No. 2-A Tolliver, open 2-in. tubing, 45 min. 44
Gulf Prod. Co.'s No. 8 T. B. Cashen, ⅝-in. tubing choke 60
Fred Hambury's No. 2 M. L. Thompson, open 2-in. tubing, ½ hr. 40
Humble Oil & Ref. Co.'s No. 6 J. H. Arnold, ⅝-in. tubing choke 88
Humble Oil & Ref. Co.'s No. 3 R. T. Cameron, ⅝-in. tubing, ½ hr. 35
Humble Oil & Ref. Co.'s No. 4 R. W. Naulls, ⅝-in. tubing 30
Humble Oil & Ref. Co.'s No. 1 Amanda Simmon, 1-in. tubing, ½ hr. 48
Humble Oil & Ref. Co.'s No. 6 J. E. B. Sneed, ⅝-in. tubing choke, ½ hr. 43
Humble Oil & Ref. Co.'s No. 5 J. Thompson, ⅝-in. tubing choke 75
Marr Drilling Co.'s No. 1 Tom Lacy, ⅝-in. tubing choke, ¼ hr. 7
Mid-Kansas Oil & Gas Co.'s No. 11 S. H. Moores, 2-in. lead 44
Moss and Urschel's No. 5 Deason, open 2½-in. tubing, 2 hrs. 100
J. E. Oliver's No. 1 Curtis Pool, 1-in. tubing choke 75
Yoondell Rogers' No. 3 Bradford, open 2-in. tubing 65
Floyd Scott's No. 2 Rae Pool, 2-in. tubing 20
Sun Oil Co.'s No. 3 Alfred Lee, open 2-in. tubing 62
The Texas Co.'s No. 4 W. W. Henry, open 2-in. tubing 40
The Texas Co.'s No. 8 Kersh, 2-in. tubing 100
Tidal Oil Co.'s No. 9 Pinkston, open 2-in. tubing, ¼ hr. 25
R. H. Vice's No. 2 W. O. Alford, 2½-in. tubing 125
Gulf Prod. Co.'s No. 7-B C. E. Christian, ⅝-in. tubing choke 67
Gulf Prod. Co.'s No. 6 Sexton estate, ⅝-in. tubing choke 62
George Guthrie et al's No. 2 Mrs. George Perry, 1-in. tubing choke 52
Humble Oil & Ref. Co.'s No. 41 L. D. Crim, ⅝-in. tubing choke 85
Humble Oil & Ref. Co.'s No. 45 L. D. Crim, ⅝-in. tubing choke 101
Humble Oil & Ref. Co.'s No. 18-B S. S. Laird, ⅝-in. tubing 45
Humble Oil & Ref. Co.'s No. 9-B H. Sexton, ⅝-in. tubing choke, ½ hr. 32
Frank King's No. 3 Scroggins, ⅝-in. tubing choke, 10 min. 15
Laytett Oil Co.'s No. 2 Robertson, ⅝-in. tubing choke 75
Snider and Pradlin-Oliver's No. 1 Brightwell, open tubing, 10 min. 20
Sun Oil Co.'s No. 10 J. R. Beall, tapered tubing 45
Tidal Oil Co.'s No. 9-A J. S. Bean, open tubing 35
Clint Wood Drilling Co.'s No. 2 Scroggins, ⅝-in. tubing choke, 10 min. ... 15
Arrow Ref. Co.'s No. 3 Thrash, open tubing, ½ hr. 75
Aston Oil Co.'s No. 7 J. R. Alford, open 2-in. tubing 100
J. Pollard's No. 3, Calvin Young, open 2½-in. tubing 90
East Texas Ref. Co.'s No. 4 John Bell, tapered tubing 44
F. H. E. Oil Co.'s No. 3-D M. L. Thompson, open 2½-in. tubing, 40 min. 44
Florence Oil Co.'s No. 3 Motley, ⅝-in. tubing choke 35
Gant and Garwin's No. 4 Moore, open 2-in. tubing 42
Gant and Garwin's No. 6 Moore, 2-in. tubing 40
Humble Oil & Ref. Co.'s No. 10-A Blackwell, ⅝-in. tubing, ½ hr. 39
Humble Oil & Ref. Co.'s No. 6-C Ida Holt, ⅝-in. tubing choke, ½ hr. 36
Humble Oil & Ref. Co.'s No. 5-B Kangerga, ⅝-in. tubing choke, ½ hr. .. 34
Humble Oil & Ref. Co.'s No. 6 W. B. Key, ½ hr. tubing choke 30
Humble Oil & Ref. Co's No. 20 W. L. Price, ⅝-in. tubing, ½ hr. 32
Humble Oil & Ref. Co.'s No. 22 W. L. Price, ⅝-in. tubing choke, ½ hr. 43
Humble Oil & Ref. Co.'s No. 6-A R. E. L. Silvey, ⅝-in. tubing 72
Humble Oil & Ref. Co.'s No. 11-A R. E. L. Silvey, ⅝-in. tubing, ½ hr. 34
Hunt Prod. Co.'s No. 6-B Bradford, pumping 3 hrs. 44
Hunt Prod. Co.'s No. 10-C R. W. Fair, open 2-in. tubing, ¼ hr. 40
Hunt Prod. Co.'s No. 10 C. Young, 2-in. tubing, 22 min. 44
E. O. N. Johnson's No. 2 Z. Bradford, open 2-in. tubing 52
R. J. McMurray's No. 1-C Blackwell, open 2-in. tubing, ⅝ hr. 44
M. B. G. Oil Co.'s No. 5 H. L. Griffin, open 2-in. tubing 65
Mid-Kansas Oil & Gas Co.'s No. 5 Clay heirs, 2-in. lead 20
Mid-Kansas Oil & Gas Co.'s No. 34 W. T. Grissom, 2-in. lead 130
Mid-Kansas Oil & Gas Co.'s No. 5 George Moore, 2-in. lead 108
Mid-Kansas Oil & Gas Co.'s No. 11 M. A. Price, 2-in. lead 98
George Ray's No. 5 Pinkston, open 2-in. tubing 30
W. F. Reynolds' No. 1 H. Stoddard, open casing 75
Sinclair Prairie Oil Co.'s No. 10-A Tipps, open 2½-in. tubing, ½ hr. 65
Stanolind and Pure Oil Co.'s No. 31 W. H. Siler, open tubing, 42 min. 46
Stanolind and Pure Oil Co.'s No. 35 W. H. Siler, ⅝-in. tubing, 55 min. 44

Wells completed 146
Initial production 7779

SMITH COUNTY

Pitner and West's No. 2-A L. S. Sartain, open 2½-in. tubing 120
Pace Pet. Corp.'s No. 1 Bateman, open tubing 50
Sun Oil Co.'s No. 1 Hudnott and Melton, open tapered tubing 32
Arcadia Refining Co.'s No. 6-A Green, open 2½-in. tubing, ½ hr. 37
Graham Bros.' No. 1 S. S. Cooke, open 2-in. tubing 120
W. B. Hinton's No. 7 Mayfield, ⅛-in. tubing choke 60
Humble Oil & Ref. Co.'s No. 6 M. C. Thompson, ⅝-in. tubing choke, ½ hr. 35
K. G. T. Oil Co.'s No. 4 S. S. Cooke, open 2½-in. tubing, 10 min. 50
Sinclair Prairie Oil Co.'s No. 6 Amanda Wiley, open 2½-in. tubing 100
Virgo Oil Co.'s No. 1 Green, open 2½-in. tubing, ½ hr. 50
J. S. Wheelis' No. 7 J. J. Smith, ⅝-in. tubing choke 60
Zion Oil Co.'s No. 1-A J. Wilson, open 2-in. tubing 100
Sun Oil Co.'s No. 12 J. D. Henson, tapered tubing 54
The Texas Co.'s No. 4-B A. S. Jarvis, open 2-in. tubing 80
Alph Tillman et al's No. 1 Jessie Cole, open 2-in. tubing 120
Arcadia Ref. Co.'s No. 7-A Green, ⅝-in. tubing choke 70
Mid-Kansas Oil & Gas Co.'s No. 9 M. L. Thompson, 2-in. lead 124
Pugh E. Hickman's No. 4 S. S. Cooke, open 2-in. tubing 60
Sinclair Prairie Oil Co.'s No. 16-C Jarvis, open 2-in. tubing, ¼ hr. 30
Weaver et al's No. 3 T. O. Wright, open 2½-in. tubing 120
C. K. West's No. 2 Sartain, open 2-in. tubing, ¼ hr. 42

Wells completed 21
Initial production 1514

UPSHUR COUNTY

Humble Oil & Ref. Co.'s No. 15 J. K. Edwards, ⅝-in. tubing choke 95
Humble Oil & Ref. Co.'s No. 4 A. J. Watkins, ⅝-in. tubing choke 53
T. H. McKinley's No. 1 Brawley, open 2-in. tubing 40
Humble Oil & Ref. Co.'s No. 6-B Miller, ⅝-in. tubing, ¼ hr. 18
Humble Oil & Ref. Co.'s No. 2 M. H. Reeves, ⅝-in. tubing choke 77
Humble Oil & Ref. Co.'s No. 12 I. D. Smith, ⅝-in. tubing choke 54
Peckham et al's No. 2 Bland, ⅝-in. tubing choke 60
Simms and Russ' No. 7 J. J. Flewellen, open 2½-in. tubing 75
Stanolind-Simms et al's No. 7-C J. J. Flewellen, 2½-in. tubing, ½ hr. 21
Steen Drilling Co.'s No. 4 J. F. Phillips, open 2½-in. tubing 45
Cal-Pet Corp.'s No. 10 Walker, open tubing, 2½-in. tubing 108
Humble Oil & Ref. Co.'s No. 5 E. Edwards, ⅝-in. tubing choke 72
Humble Oil & Ref. Co.'s No. 1, ⅝-in. tubing choke 66
Magnolia Pet. Corp.'s No. 7 H. Hampton, 2-in. tubing 152
Perrin and Fell's No. 2 W. M. Landers, 1-in. tubing choke 65
E. L. Smith et al's No. 1 E. A. Watts, open 2-in. tubing, by heads 15
Conservative Oil Co.'s No. 9 O. M. Victory, ⅝-in. tubing choke 75
East Mountain Prod. Co.'s No. 2 Shelton, 2-in. tubing 150
Feazel and Davenport's No. 6 Phillips, 1-in. tubing choke 30
Humble Oil & Ref. Co.'s No. 5-B E. O'Byrne, ⅝-in. tubing, ¼ hr. 12
Humble Oil & Ref. Co.'s No. 13 I. D. Smith, ⅝-in. tubing 88
Scott and Ashford's No. 1 Duphrates... abd
Simms and Stanolind Oil & Gas Co.'s No. 22-N J. J. Flewellen, open 2½-in. tubing 80
Sorrells and Owens' No. 1 J. W. Free, 24 hrs. pumping 75
Sun Oil Co.'s No. 8 J. Hargroves, open 2-in. tubing 20

Wells completed 25
Initial production 1546
Abandoned 1

VAN ZANDT COUNTY

Pure Oil Co.'s No. 5 D. R. Howell, 24-hr. gauge 212
Pure Oil Co.'s No. 6 I. M. Brawner, 24-hr. gauge 252
Pure Oil Co's No. 4 A. F. Magers, 24-hr. gauge 72
Pure Oil Co.'s No. 3 J. J. Taylor, 24-hr. gauge 200
Pure Oil Co.'s No. 3 W. H. Morris, 24-hr. gauge 40
Pure Oil Co.'s No. 2 Wylie Enas, proration gauge, 24-hrs. 85
Pure Oil Co.'s No. 3 A. D. Clark, proration gauge, 24 hrs. 77
Pure Oil Co.'s No. 4 G. V. Stewart, proration gauge, 24 hrs. 100
The Texas Co.'s No. 7 R. A. Tunnell, proration gauge, 24 hrs. 110
Pure Oil Co.'s No. 2 A. D. Clark, proration gauge, 24 hrs. 44

Wells completed 10
Initial production 1192

North Central Texas Fields

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Archer	32	926	16	0
Brown	2	65	1	0
Callahan	8	0	5	3
Clay	2	0	2	0
Coleman	2	30	1	0
Cooke	2	15	1	0
Jack	3	0	3	0
Palo Pinto	4	0	3	1
Eastland	3	100	0	3
Shackelford	3	65	2	0
Wichita	16	96	11	0
Wilbarger	2	0	2	0
Young	27	382	18	0
Total October	111	1,679	...	6
Total September	128	2,625	74	2
Difference	17	946	9	4

Summary of Rigs and Wells Drilling

	Rigs	S.D.	Drlg.	Ttl.
Archer	12	9	16	37
Brown	0	7	4	11
Callahan	6	3	8	17
Coleman	3	2	8	13
Cooke	3	2	2	7
Eastland	3	1	0	4
Grayson	1	3	3	7
Jack	3	2	5	10
Palo Pinto	2	5	5	12
Shackelford	5	4	6	15
Stephens	0	0	1	1
Throckmorton	2	3	0	5
Wichita	1	2	8	11
Wilbarger	0	0	6	6
Young	11	4	23	38
Miscellaneous	6	12	9	27
Total October	58	59	104	221
Total September	61	63	90	214
Difference	3	4	14	7

WELLS COMPLETED

ARCHER COUNTY

Wilson Drlg. Co. No. 1 Parrish Bros... abd
R. J. Brown No. 7 Plemmons 45
Burns and Long No. 6 Alexander 4
Castle Oil Co. No. 1 Matlock ..... abd
J. C. Cunningham No. 1 Taylor ..... abd
H. C. Dean No. 2 Abercrombie 15
Duncan and White No. 1 Webb ..... abd
F.H.E. Oil Co. No. 1 Coffield 25
Gilliland and Rosser No. 1 Echols 15
E. N. Goodrick No. 1 Weinzapfel ..... abd
J. P. Harris No. 1 Andrews ..... abd
Helena Oil & Gas Co. No. 1 Ray 205
Kimmell and Woofter No. 10 Williams abd
Wayne Kine et al No. 1 King ..... abd
McDonald and Williams No. 1 Hasson.. abd
A. P. Nicholson No. 3 Taylor ..... abd
E. H. Sharp No. 2 Coffield 25
Texas Plains Co. No. 11 Terrell 40
White Duncan No. 11 Webb 150
White Duncan No. 1 Webb 25
Wichita Prod. Co. No. 1 Stewart ..... abd
R. J. Brown No. 8 Plemmons 100
Conoco and Consolidated Oil Co. No. 8 Ward ..... abd
Cullum and Sinclair Prairie Oil Co. No. 1 Falls 101
Golding and Cochran No. 2 Richardson abd
Hart and Coffiin No. 1 Fish ..... abd
W. E. Maxson, Jr., No. 16 Green 40
A. Mennick No. 6 Wilson 6
Morris and Dunn No. 1 Veasey ..... abd
G. L. Pace No. 4 Arnold 70
Schuits and Weaver No. 10 Green 60
T. G. Shaw No. 1 Williams ..... abd

Completions 32
Initial production 926
Abandoned 16

BROWN COUNTY

E. M. Curry No. 1 Hickman ..... abd
Young Bros. and Alexander No. 4 Kilgore 65

Completions 2
Initial production 65
Abandoned 1

CALLAHAN COUNTY

M. D. Heist No. 1 Leverage ..... abd
M. D. Heist No. 2 Leverage ..... abd
M. D. Heist No. 3 Leverage ..... gas
M. D. Heist No. 4 Leverage ..... gas
Hobbs and Ferguson No. 1 Bell ..... abd
Kleiner Bros. No. 5 Isenhour ..... abd
Matson Drlg. Co. No. 11 Radford ..... abd
M. E. Daniels No. 14 Dillard ..... gas

Completions 8
Gas 3
Abandoned 5

COLEMAN COUNTY

Claude Brown No. 1 Henderson 30
R. Kamon No. 1 Pfluger ..... abd

Completions 2
Initial production 30
Abandoned 1

COOKE COUNTY

W. D. Cline No. 3 Clayton 15
Seitz, Comegys and Seitz No. 1 Trubenback ..... abd

Completions 2
Initial production 15
Abandoned 1

EASTLAND COUNTY

Texas Pacific Coal & Oil Co. No. 9 fee. 100
George Wilkins No. 1 Mrs. O. C. Holcomb ..... gas

Arab Gasoline Co. No. 1 Hart ..... gas

Completions 3
Initial production 100
Gas wells 2

CLAY COUNTY

Developers Oil & Gas Co. No. 18 fee ... abd
R. N. Gable No. 1 Waggoner ..... abd

Completions 2
Abandoned 2

JACK COUNTY

Consolidated Oil Co. et al No. 1 Wright abd
L. Franklin No. 1 Wright ..... abd
McKee Drlg. Co. No. 1 Hunt ..... abd

Completions 3
Abandoned 3

PALO PINTO COUNTY

Brazos River Oil & Gas Co. No. 2 Bridges ..... abd
Hoffman and Page No. 1 Chilson .... abd
Palo Pinto Oil & Gas Corp. No. 1 T.&P.R.R. ..... gas
A. T. Strong No. 1 Allen and Ritchie.. abd

Completions 4
Gas wells 1
Abandoned 3

SHACKELFORD COUNTY

George Callahan No. 1 Jeter 15
Gilman and McMurry No. 5-A Jeter .. 10
Lowe and Delaney No. 3-A Alexander.. 8
J. A. Bearman No. 1 Mathews ..... abd
C. S. Brewer No. 2 Jeter 10
Hyde and James No. 1 Morris and Buie 12
Tannehill Oil Co. No. 31 Newell 10
L. Warren No. 2 Smith ..... abd

Completions 8
Initial production 65
Abandoned 2

WICHITA COUNTY

Chapman et al No. 3 Parker ..... abd
George W. Cooper No. 3 Neal 40
F. C. Baldwin No. 7 G. L. Dobie ..... abd
Madison Oil & Gas Co. No. 22 Burnett. 8
W. T. Mead No. 1 Throckmorton 5
Margren and Anderson No. 1 Goetze ... 25
Rubsom and Hunter No. 9 McClure 18
Turman Oil Co. No. 22 Waggoner ..... abd
S. H. Walton No. 2 Gulf ..... a d
W. C. Chapman et al No. 2 Parker ... abd
Gray and Ferguson No. 1 Sisk ..... abd
C. N. Clark et al No. 2 Allen and Kemp abd
J. C. Clower No. 16 Dobie ..... abd
J. & M. Hemay No. 1 Hoozer ..... abd
Rathke Co. No. 2 Haggard ..... abd
Ryan Consolidated Oil Co. No. 1 Womack ..... abd

Completions 16
Initial production 96
Abandoned 11

WILBARGER COUNTY

John O'Neil No. 4 Castleberry ..... abd
The Texas Company No. 404 Waggoner. abd

Completions 2
Abandoned 2

YOUNG COUNTY

Bohner Oil Corp. No. 11 Edwards .... abd
Charles A. Daubert No. 1 Weems ..... abd
Holbrock and Wood No. 7 Watson 3
Hunter Oil Corp. No. 5 Bloodworth ... 50
HY Oil Co. No. 5 Larimore 105
Iron Mountain Oil Co. No. 9 Tatum ... 43
Primrose Ref. Co. No. 2 Barnett ..... abd
Guy C. Roley No. 1 Morris ..... abd
E. R. Riggs No. 2 McClure ..... abd
Guy H. Scholls No. 1 Morris ..... a d
Simmons and Lively No. 1 Drum 4
Simmons and Lively No. 3 Drum ..... abd
W. F. Snebold No. 1 Christian ..... abd
United Producers Co. No. 3 Duncan ... 24
Wooten and Reid No. 1 Robinson ..... abd
Davis et al No. 1 Tidwell ..... abd
G. C. Gilmore No. 1 Spur ..... abd
HY Oil Co. No. 6 Larimore ..... abd
Iron Mountain Oil Co. No. 1 Jordan ... 5
L. M. Jones No. 1 Veck ..... abd
King Royalty Co. and Heydrick No. 8 Daniel ..... abd
E. R. Riggs No. 1 Taylor ..... abd
J. W. Sparks ..... abd
The Texas Company No. 1 Keith 123
Ed. Wellis et al No. 1 Sewell ..... abd
Wooten and Reed No. 1 Swain 25
Rathke Oil Co. No. 1 Allen ..... abd

Completions 27
Initial production 382
Abandoned 18

Texas Panhandle Fields

Summary of Wells Completed

County—	Comp.	Prod.	Dry	Gas
Carson	3	1,230	0	0
Gray	7	9,284	1	0
Hutchinson	1	17	0	0
Moore	1	0	1	0
Wheeler	2	15	1	0
Total	14	10,546	3	0
Total last month	17	6,145	1	2
Difference	3	4,401	2	2

Summary of Rigs and Wells Drilling

County—	Rigs	S.D.	Dig.	Ttl.
Carson	2	0	6	8
Gray	7	9	12	28
Hutchinson	3	5	6	14
Moore	1	1	2	4
Roberts	0	2	1	3
Miscellaneous	1	7	6	14
Total	14	24	33	71
Total last month	14	21	31	66
Difference	0	3	2	5

WELLS COMPLETED

CARSON COUNTY

Skelly Oil Co.'s No. 13 East Shaffer... 536
The Texas Co.'s No. 1 Noel (old well deepened) 120
Skelly Oil Co.'s No. 19 West Schaffer.. 574

Wells completed 3
Initial production 1230

GRAY COUNTY

Gulf Prod. Co.'s No. 11 Bowers (old well deepened) 20
R. A. Nipper et al's No. 1 Morse ..... abd
Plains Drilling Co.'s No. 1 Thut 40
Skelly Oil Co.'s No. 6 Saunders 6405
The Texas Co.'s No. 12 Williams 1870
The Texas Co.'s No. 10 Cook-Faulkner.. 349
Continental Oil Co.'s No. 3 Finley (old well deepened) 600

Wells completed 7
Initial production 9284
Abandoned 1

HUTCHINSON COUNTY

Sinclair Prairie Oil Co.'s No. 12-B Johnson (old well deepened) 17

Wells completed 1
Initial production 17

MOORE COUNTY

Cloud and Dana Oil Co.'s No. 1 Jones (old well deepened) ..... abd

Wells completed 1
Abandoned 1

WHEELER COUNTY

El Bor Corp.'s No. 1 Huselby ..... abd
Piney Oil & Gas Co.'s No. 4 Thompson (Bentley) 15

Wells completed 2
Initial production 15
Abandoned 1

West Texas Fields

Summary of Wells Completed

	Comp.	Prod.	Dry	Gas
Coke	1	0	1	0
Glasscock	2	3,730	0	0
Howard	2	28	1	0
Irion	1	0	1	0
Jones	2	20	1	0
Loving	2	0	2	0
Pecos	5	143	1	0
Taylor	1	30	0	0
Upton	1	145	0	0
Ward	5	430	1	0
Total Oct.	23	4,526	8	0
Total September	20	2,456	4	0
Difference	3	2,070	4	0

Summary of Rigs and Wells Drilling

	Rigs	S.D.	Dig.	Ttl.
Brewster	0	2	0	2
Crockett	1	2	2	5
Ector	0	1	5	6
Fisher	0	1	3	4
Glasscock	0	0	4	4
Howard	0	0	5	5
Irion	0	1	1	2
Jones	1	3	4	8
Loving	2	4	3	9
Pecos	2	2	3	7
Reagan	0	0	6	6
Reeves	0	2	0	2
Schleicher	0	2	0	2
Scurry	1	3	0	4
Tom Green	0	4	0	4
Upton	1	0	3	4
Val Verde	0	3	0	3
Ward	8	7	17	32
Winkler	3	0	2	5
Miscellaneous counties	2	9	2	13
Total October	21	46	60	127
Total September	23	49	57	129
Difference	2	3	3	2

WELLS COMPLETED

COKE COUNTY

Mid-Kans. O. & G. Co. No. 1 Henry ... abd

Well completed 1
Abandoned 1

GLASSCOCK COUNTY

Tribal Oil Co. No. 2 Edwards.....3024
Calif. Oil Co. No. 19 Byrne..... 690
Continental Oil Co. No. 2 Hart Phillips 16

Wells completed 3
Production 3730

HOWARD COUNTY

McCasten-Smith No. 1 Roberts ..... abd
Pure Oil Co. No. 13 Chalk..... 28

Wells completed 2
Production 28
Abandoned 1

IRION COUNTY

Davis et al No. 1 Suggs..... abd

Well completed 1
Abandoned 1

JONES COUNTY

Ungren and Frazier No. 2 King..... abd
J. M. Jones No. 1 W. D. Swann..... 20

Wells completed 2
Production 20
Abandoned 1

LOVING COUNTY

Folbres and Evans No. 1 Dean..... abd
Erwin-Mabres No. 1 Thorpe..... abd

Wells completed 2
Abandoned 2

PECOS COUNTY

Hampton et al No. 1 Byrne ..... abd
Cardinal Oil Co. No. 13-E Tippett..... 20
New State Oil Co. No. 1 Tippett..... 100
Cardinal Oil Co. No. 2-K Tippett..... 20
Stanolind O. & G. Co. No. 6 Toborg... 3

Wells completed 5
Production 143
Abandoned 1

TAYLOR COUNTY

Dunigan et al No. 2 Hunter..... 30

Well completed 1
Production 30

UPTON COUNTY

Crosby Prod. Co. No. 2 Lane..... 145

Well completed 1
Production 145

WARD COUNTY

Barnsdall Oil Co. No. 3 Henry..... 190
Richardson et al No. 10 O'Byrne 135
Abell Bros. No. 1 Smith..... 15
White et al No. 1 Bertner..... abd
Sturm and Simms Oil Co. No. 3 Jones. 40

Wells completed 5
Production 430
Abandoned 1

Southwest Texas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
N. Pettus	1	150	0	0	0	0	0
Tuleta	2	50	1	0	0	1	1
Alta Mesa	1	0	0	1	0	0	0
Cole	2	20	1	1	1	1	2
Gov. Wells	12	10,434	0	0	2	5	7
Sarnosa	3	0	3	0	2	0	2
Sal-Mar	2	0	2	0	1	1	2
Wentz	1	0	1	0	1	0	1
Jacob	1	100	0	0	1	1	2
Saxet	2	150	0	1	4	5	9
Los Olmos	3	100	1	0	1	11	12
Rio Grande	3	0	3	0	0	2	2
Ch. Redondo	1	0	1	0	0	1	1
Escobas	1	60	0	0	0	1	1
Miscellaneous	30	105	28	0	28	94	122
Total Oct.	65	11,099	41	3	41	123	164
Total Sept.	91	16,566	38	3	29	129	158
Difference	26	5,467	3	0	12	6	6

WELLS COMPLETED

NORTH PETTUS FIELD—BEE COUNTY

Ray McKinney, Gulf Port Oil Co. 5 . 150

TULETA FIELD—BEE COUNTY

Harris, O'Neill & C.R.&M. 1-A 80
Harris, Nichols & C.R.&M. 2 ..... abd

ALTA MESA—BROOKS COUNTY

Garcia, Ed East 3 ..... gas

COLE FIELD—DUVAL COUNTY

Benavides, Cole Pet. Co. 78 20
Benavides, French Oil Corp. 1 ..... abd

SARNOSA FIELD—DUVAL COUNTY

Weil, John F. Camp 2 ..... abd
Duval County Ranch Co., Thomas & Tarver 2 ..... abd
Williams, Edwin M. Jones 1 ..... abd

GOVERNMENT WELLS FIELD—DUVAL COUNTY

Wendt, Magnolia Pet. Co. 8 720
Bennett, San Diego Oil Corp. 2 720
White, Humble O. & R. Co. 7 840
Wendt, H. H. Coffield 3 360
Allen, Magnolia Pet. Co. 1 720
Johnson, The Texas Company 1 3000
Wendt, Seacord & Putman 1 1344
Bennett, San Diego Oil Corp. 3 150
Johnson, Magnolia Pet. Co. 4 300
Hahi, Whisenant, Trenchard & French 4 800
Bennett, San Diego Oil Corp. 2 480
Lundvall, Highland Oil Co. 1 1000

SAL-MAR FIELD—GUADALUPE COUNTY

Behring, Geo. E. Smith 2 ..... abd
Behring, Geo. E. Smith 1 ..... abd

WENTZ FIELD—McMULLEN COUNTY

Two Rivers Ranch Co., V. G. Schimmel 2 ..... abd

JACOB POOL—McMULLEN COUNTY

Jacob, Jacob, Buzzini & Pickett A-6 .. 100

SAXET FIELD—NUECES COUNTY

Harrell, Houston Oil Co. A-2 150
Isencee, McCarthy, Rogers, Nix et al 1 gas

LOS OLMOS FIELD—STARR COUNTY

Kelsey Bass, Los Olmos Oil & Gas Co. 25 ..... '25
Kelsey Bass, Hooks & Weaver 13 ..... abd
Kelsey Bass, Los Olmos Oil & Gas Co. 26 75

RIO GRANDE CITY FIELD—STARR COUNTY

O'Mears, S. S. Smith & Porter 1 ..... abd
Doyno, Jack Myers 2 ..... abd
Goodrich, Hoffman & Flowers 1 ..... abd

CHARCO REDONDO FIELD—ZAPATA COUNTY

Martinez, L. G. Smith 1 ..... abd

ESCOBAS FIELD—ZAPATA COUNTY

Measles, The Texas Company 13 60

Wells completed 35
Production 11,094
Gas production 37,000,000
Abandoned 13

Miscellaneous Counties

ATASCOSA COUNTY

Dickinson, E. A. Parkford 1 ..... abd
Blackwell, G. W. Partee 1 ..... a d

BASTROP COUNTY

Sloop, Marts & Beavens 1 ..... abd
Neidig, Merts & Beavens 1 ..... abd
Riddle, R. R. Ogden 1 90
Carroll, Parsons & Mayfield 1 15

BEE COUNTY

Weiss, J. Stanley Smith 1 ..... abd

BEXAR COUNTY

Ellison, Moore-Jauer 1 ..... abd
Pierce, Kistler 1 ..... abd
Watson, Linda Oil Co. 1 ..... abd

DUVAL COUNTY

Peters, Highland Oil Co. 1 ..... abd
Sevier, Delange & Frates 1 ..... abd
Duval Co. Ranch Co., S.R.C. Oil Co. 8. abd

COLORADO COUNTY

Metuska, C. B. Bunte, Inc., et al 1 ... abd

GONZALES OUNTY

Dubose, Luling Oil & Gas Co. 1 ..... abd

GUADALUPE COUNTY

Appling, Owen & Gunby 1 ..... abd

GOLIAD COUNTY

Irby, Rowan & Hope & Phillips 1 ..... abd

KARNES COUNTY

Cockran, A. Edmiston 1 ..... abd

KERR COUNTY

Young, Evans & Gant 1 ..... abd

MEDINA COUNTY

Little, Robertson Drlg. Co. 1 ..... abd

MILAM COUNTY

Ward, Kyser & Roberts 3 ..... abd

JIM HOGG COUNTY

Martinez, Jack Tarver 1 ..... abd

STARR COUNTY

Sanchez, L. W. Connor et al 1 ..... abd

TRAVIS COUNTY

Lundgren, Ray & Orth 1 ..... abd

WEBB COUNTY

Garcia, Blair & Livingston 1 ..... abd
Ortiz, Thompkins et al 1 ..... abd

WILLIAMSON COUNTY

Edge, Burns et al 1 ..... abd
Merrell, M. L. Vaughn 1 ..... abd
Shrane, McNeill-Matthews, Inc., 1 .... abd
Littleton, McNeil & Orth 1 ..... abd

Wells completed 30
Production 105
Abandoned 28

Gulf Coast Fields

Texas

Summary of Field Operations

Field—	Comp.	Prod.	Abd.	Gas	Rigs	Drlg.	Ttl.
Ariola	1	0	1	0	0	4	4
Barbers Hill	2	825	0	0	1	14	15
Batson	4	18	0	0	0	2	2
Big Creek	1	55	0	0	0	3	3
Blue Ridge	1	120	0	0	0	1	1
Clay Creek	1	0	1	0	0	0	0
Conroe	20	21,365	3	1	4	26	30
Damon Mound	0	0	0	0	0	3	3
Esperson	0	0	0	0	0	3	3
Fannett	0	0	0	0	1	1	2
Goose Creek	1	25	0	0	0	1	1
High Island	3	3,900	0	0	0	4	4
Hull	4	925	1	0	2	9	11
Humble	2	135	0	0	0	5	5
Liberty	0	0	0	0	0	1	1
Lost Lake	0	0	0	0	0	1	1
Manvel	0	0	0	0	0	1	1
Markham	1	0	1	0	0	0	0
Moss Bluff	0	0	0	0	0	1	1
Mykawa	1	0	1	0	0	2	2
North Dayton	1	0	1	0	0	1	1
Orange	0	0	0	0	0	1	1
Orchard	0	0	0	0	0	1	1
Pierce Jctn.	2	2	1	0	0	3	3
Port Neches	1	145	0	0	0	0	0
Rabbs Ridge	10	13,224	1	0	3	10	13
Racoon Bend	1	1,200	0	0	0	1	1
Refugio	3	0	2	0	0	3	3
Saratoga	4	46	1	0	0	2	2
Sour Lake	0	0	0	0	0	1	1
W. Columbia	1	0	1	0	0	0	0
Miscellaneous	20	0	18	2	4	51	55
Total Oct.	84	41,995	33	3	15	155	170
Total Sept.	67	31,349	23	3	11	144	155
Difference	17	10,646	10	0	4	11	15

Louisiana

Cam'r'n M'd'w	0	0	0	0	1	0	1
Choctaw	1	300	0	0	0	0	0
Dog Lake	1	0	1	0	0	0	0
Edgerly	0	0	0	0	0	1	1
Gueydan	0	0	0	0	0	1	1
Hackberry, E.	5	1,439	2	0	0	1	1
Hackberry, O.	2	0	2	0	0	1	1
Iowa	1	1,200	0	0	0	1	1
Jennings	1	150	0	0	0	2	2
Lake Barre	1	1,775	0	0	1	2	3
Lake Pelto	1	0	1	0	0	0	0
Lake W'h'g't'n	1	20	0	0	0	2	2
Leesville	0	0	0	0	0	1	1
Lockport	1	750	0	0	1	1	2
Sorrento	0	0	0	0	0	1	1
Starks	0	0	0	0	0	2	2
Sulphur	0	0	0	0	0	3	3
Sweet Lake	0	0	0	0	0	1	1
Vinton	1	0	1	0	0	3	3
White Castle	0	0	0	0	0	1	1
Miscellaneous	3	0	3	0	0	4	4
Total Oct.	19	5,634	10	0	3	28	31
Total Sept.	23	8,109	10	0	2	34	36
Difference	4	2,475	0	0	1	6	5
Ttl. Gulf C...	103	47,629	42	3	18	183	201
Total Sept.	90	39,458	33	3	13	178	191
Difference	13	8,171	9	0	5	5	10

TEXAS

WELLS COMPLETED

ARIOLA—HARDIN COUNTY

Ariola fee, Houston Oil Co. 1-X ..... abd

BARBERS HILL—CHAMBERS COUNTY

Higgins, Sun Oil Co. 3 325
Kirby, Texas Gulf Prod. Co. 3-C 500

Wells completed 2
Production 825

BATSON—HARDIN COUNTY

Lovett Davis, Ada Belle Oil Co. 10 ... 6
Bates, East Batson Oil Co. 3 5
Wing, Gulf Prod. Co. 173 3
Paraffin, Paraffin Oil Co. 96 5

Wells completed 4
Production 18

BIG CREEK—FORT BEND COUNTY

Davis, Hardin & Holloway 1 55

BLUE RIDGE—FORT BEND COUNTY

Blakely, Coronado Oil Co. 3 120

CLAY CREEK—WASHINGTON COUNTY

Bimage, Clay Creek Oil Co. 1 ..... abd

CONROE—MONTGOMERY COUNTY

South Tex. Dev. Co., Gulf Coast Drlg. & Dev. Co. 2-B 260
Hooper, Hooper-Rutheford Oil Co. 1 ...2050
Hooper, Houston Oil Co.-Heep Oil Corp. 1 1200
Cartwright, Humble Oil & Ref. Co. 3-A.1150
Cartwright, Humble Oil & Ref. Co. 4-A.1800
Cartwright, Humble Oil & Ref. Co. 5-A.1680
Gohison & Cartwright, Humble Oil & Ref. Co. 1 1490
Madeley, Humble Oil & Ref. Co. 1 1320
Plaefflin, Humble Oil & Ref. Co. 1 .... gas
South Texas Dev. Co., Humble Oil & Ref. Co. 2 675
South Texas Dev. Co., Humble Oil & Ref. Co. 9 1380
South Texas Dev. Co., Humble Oil & Ref. Co. 10 580
South Texas Dev. Co., Humble Oil & Ref. Co. 11 2400

South Texas Dev. Co., Humble Oil & Ref. Co. 13 1440
South Texas Dev. Co., Humble Oil & Ref. Co. 15 2400
South Texas Dev. Co., Humble Oil & Ref. Co. 19 ..... abd
Keystone Mills, Plummer & McDaniel 1. 340
Alexander, Rowe & Flowers 1 ..... abd
Dunn, Showers & Moncrief 1 (first hole) ..... abd
Hooper, Steinberger et al 1 1200

Wells completed 30
Production 21,365
Abandoned 3
Gas 1

GOOSE CREEK—HARRIS COUNTY
Schilling, Newton & Lillie 6 25
HIGH ISLAND—GALVESTON COUNTY
Cade, Yount Lee Oil Co. 31 1400
Smith, Yount Lee Oil Co. 12 1400
Spencer, Yount Lee Oil Co. 2 1100

Wells completed 3
Production 3900

HULL—LIBERTY COUNTY
Antilley, Carpenter & Parr 1 25
Dolbear, Gulf Prod. Co. 81 ..... abd
Baldwin, Houston Prod. Co. 1 300
Hannah, The Texas Company 7 600

Wells completed 4
Production 925
Abandoned 1

HUMBLE HARRIS COUNTY
River, Sun Oil Co. 63 35
River, Sun Oil Co. 63 100

Wells completed 2
Production 125

MARKHAM—MATAGORDA COUNTY
Meyers, Rycade Oil Corp. 4 ..... abd
MYKAWA—HARRIS COUNTY
Ward, Hamill & Smith 1 ..... abd
NORTH DAYTON—LIBERTY COUNTY
Gulf, V. H. Borsodi 2 ..... abd
PIERCE JUNCTION—HARRIS COUNTY
Taylor, Gulf Prod. Co. 35 2
Fee, Rio Bravo Oil Co. 12 ..... abd

Wells completed 2
Production 2
Abandoned 1

PORT NECHES—ORANGE COUNTY
Polk-Kuhn-Glass, The Texas Company 2 145
RABBS RIDGE—FORT BEND COUNTY
Gubbels, Gulf Prod. Co. 1 1500
F. I. Booth, Humble Oil & Ref. Co. and Gulf Prod. Co. 4-A 2085
F. I. Booth, Humble Oil & Ref. Co. and Gulf Prod. Co. 5-A 1490
T. R. Booth, Humble Oil & Ref. Co. and Gulf Prod. Co. 8 2000
George, Humble Oil & Ref. Co. and Gulf Prod. Co. 1309
George, Humble Oil & Ref. Co. and Gulf Prod. Co. 2-A 190
Lockwood & Sharp, Humble Oil & Ref. Co. and Gulf Prod. Co. 3-A ..... abd
Lockwood & Sharp, Humble Oil & Ref. Co. and Gulf Prod. Co. 4-B 1300
Meyers, Humble Oil & Ref. Co. and Gulf Prod. Co. 4 1440
Wolters, The Texas Company 2 1320

Wells completed 10
Production 13,234
Abandoned 1

RACCOON BEND—AUSTIN COUNTY
Wilson, Humble Oil & Ref. Co. 5 1200
REFUGIO—REFUGIO COUNTY
Mitchell, Edwin B. Jones 1-B ..... abd
M. F. Lambert, T. P. Morgan 2 ..... abd

Wells completed 2
Abandoned 2

SARATOGA—HARDIN COUNTY
Jordit, Rio Bravo Oil Co. 88-A 15
Jordit, Rio Bravo Oil Co. 89 30
"E," Rio Bravo Oil Co. 400-B ..... abd
"B," Rio Bravo Oil Co. 401-B 1

Wells completed 4
Production 46
Abandoned 1

WEST COLUMBIA—BRAZORIA COUNTY
Abrams, The Texas Company 7 ..... abd

Miscellaneous Texas

BURLESON COUNTY
A. T. Woolridge Sur., Mitchell, J. E. Stubblefield 1 ..... abd
COLORADO COUNTY
Joshua Henneke Sur., Matuska, Bunte & Shell Pet. Corp. 1 ..... abd
FORT BEND COUNTY
N. F. Roberts Sur., Mayes, O'Hara et al 1 ..... abd
HARDIN COUNTY
Mary K. Sherman Sur., Southwestern Lbr. Co., Alexander et al 1 ..... abd
HARRIS COUNTY
Wm. Hedge Sur., Hall, Bayou Oil Co. 1 abd
A. R. Bodman Sur., Burt & Griffith, Koimm Prod. Co. 1 ..... abd
W. B. Bissonett Sur., Laureman, John R. Turnbull 1 ..... abd
JASPER COUNTY
G.C.&S.F. Sur., Eck, P. Michael et al 1 abd
MONTGOMERY COUNTY
Pevehouse Sur., Sealey, Pevehouse Oil Co. 1 ..... abd
POLK COUNTY
I.&G.N. Sur. No. 53, Carlton-Davis, G. A. Williams et al 1 ..... abd
A. Viesca Sur., Carlton-Davis, Dick Schwabb 1 ..... gas
SAN JACINTO COUNTY
H.&T.C. Sur. No. 3, Delta Ld. and Lbr. Co., Joe L. Pace 1 ..... abd
TYLER COUNTY
Mrs. E. Cherry Sur., Wilson, Allied Pet. Co. 3 ..... abd
Adolph Sterne Sur., Sterne fee, Republic Prod. Co. and Houston Oil Co. 1. gas
VICTORIA COUNTY
I.R.R. Sur. No. 20, McFaddin, Houston Oil Co. and Magnolia Pet. Co. 1-A .. abd
John M. Rine Sur., McFaddin, The Texas Company 3 ..... abd
Martin DeLeon Sur., Keeran, Union Oil Co. of Nevada 1 ..... abd
WALKER COUNTY
E. Miller Sur., Horshall, W. E. Brown 1 ..... abd
Jose Ortega Sur., Thompson Lbr. Co., Hart Oil Co. 1 ..... abd
WASHINGTON COUNTY
S. Young Sur., Giddings, M.O.&T. Corp. 1 ..... abd

Wells completed 30
Abandoned 18
Gas 2

LOUISIANA

CHOCTAW—IBERVILLE PARISH
Myrtle Grove, Standard Oil Co. 3 300
DOG LAKE—TERREBONNE PARISH
State—Dog Lake, The Texas Company 6 abd
EAST HACKBERRY—CAMERON PARISH
Watkins, Calcasieu Parish 36 35
Watkins, Calcasieu Parish 37 4
Erwin, J. G. Sutton 1 ..... abd
Gulf Land—Humble lease, Union Sulphur Co. 3 1400
Gulf Land—Pure lease, Union Sulphur Co. 1 ..... abd

Wells completed 5
Production 1439
Abandoned 2

OLD HACKBERRY—CAMERON PARISH
Sun—Vincent, Mills & Siess Oil Co. 1.. abd
Carter Sweeney, Yount Lee Oil Co. 1 .. abd

Wells completed 2
Abandoned 2

IOWA—CALCASIEU PARISH
Waite, Magnolia Pet. Co. 2 1200
JENNINGS—ACADIA PARISH
Morton, Ratcliffe Oil Co. 11 150
LAKE BARRE—TERREBONNE PARISH
Lake Barre—L.L.&E., The Texas Company 5 1775
LAKE PELTO—TERREBONNE PARISH
State—Lake Pelto, The Texas Company 7 ..... abd
LAKE WASHINGTON—TERREBONNE PARISH
Cockrell—Moran, Freeport Sulphur Co. 4 20
LOCKPORT—CALCASIEU PARISH
Martha Moss, Union Sulphur Co. 3 750
VINTON—CALCASIEU PARISH
Gray, Gulf Refining Co. 6 ..... abd

Miscellaneous Louisiana

IBERIA PARISH
Jefferson Island—Lake Peigneur, Jefferson Lake Oil Co. 38 ..... abd
LA FOURCHE PARISH
Chacahoula—Starks, State Prod. Co. "H" ..... abd
PLAQUEMINES PARISH
Garden Island—Garden Island Bay, The Texas Company 5 ..... abd

Wells completed 3
Abandoned 3

North Louisiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rigs	Drlg.	Ttl.
Avoyelles ..	0	0	0	0	0	1	1
Beauregard .	0	0	0	0	0	1	1
Bienville ...	0	0	0	0	1	1	2
Bossier	0	0	0	0	1	2	3
Caddo	2	0	1	1	4	5	9
Caldwell	0	0	0	0	0	2	2
Catahoula ..	1	0	1	0	0	0	0
Claiborne ...	2	0	1	1	1	1	2
Concordia ..	1	0	1	0	0	0	0
DeSoto	0	0	0	0	3	10	13
Grant	0	0	0	0	2	0	2
Jackson	1	0	1	0	0	0	0
Lincoln	0	0	0	0	0	1	1
Morehouse ..	0	0	0	0	1	2	3
Natchitoches.	0	0	0	0	1	10	11
Ouachita ...	0	0	0	0	0	2	2
Red River ..	0	0	0	0	0	2	2
Richland ...	1	0	1	0	0	1	1
Sabine	26	3,112	17	0	41	65	106
Tensas	0	0	0	0	0	1	1
Union	1	0	0	0	1	3	1	4
Vernon	0	0	0	0	0	1	1	2
Webster	0	0	0	0	0	1	1	2
West Carroll	0	0	0	0	0	1	0	1
Winn	0	0	0	0	0	0	1	1
Total Oct..	35	3,112	25	3	61	111	172
Total Sept.	31	3,197	20	3	46	105	151
Difference	4	85	3	0	15	6	21

*Gas production: Caddo, 7,500,000 feet; Claiborne, 2,000,000 feet; Union, 5,000,000 feet; total, 15,500,000 feet.

WELLS COMPLETED
CADDO PARISH
32-19-13 Cushman, Louana O. & G. 1.. dry
32-19-16 Cushman, Louana O. & G. 2.. gas

Wells completed 2
Gas 1
Dry 1
Gas production 7,500,000

CATAHOULA PARISH
26-9-6 McMillan, National Drlg. Co. 1.. dry
CLAIBORNE PARISH
18-23-8 Hunt, W. E. Rembert 2..... dry
1-19-6 Brown, Triangle Drlg. Co. 1... gas

Wells completed 2
Gas 1
Dry 1
Gas production 2,000,000

CONCORDIA PARISH
56-8-10 Gillespie, M. M. Stoker 1..... dry
JACKSON PARISH
19-15-3w Fee, Southern Advance Bag & Paper Co. 1..... dry
RICHLAND PARISH
20-18-7 Singletary, Natl. Gas Co. 1.... dry
SABINE PARISH
11-7-13 Sabine Lbr. Co., J. O. Anders 1. dry
31-8-10 Lyons, J. H. Askew 1..... dry
14-7-11 McNeely, J. H. Askew 1-E..... dry
5-9-12 Moore, J. M. Bridges 1..... 20
31-8-10 La. Long Leaf Lbr. Co., Bridwell O. & G. Co. 1..... dry
16-7-11 Stille, Bridwell O. & G. Co. 1.. dry
4-7-13 Garcia, Clopton et al 1..... abd
28-7-11 Davis, Coates Pet. Co. 1..... dry
3-7-13 Gray, Coates Pet. Co. 1..... abd
3-7-13 Gray, Coates Pet. Co. 2..... abd
3-7-13 Martinez, Coates Pet. Co. 4.... dry
2-7-13 Nulton, Dengail O. & G. 1-F.. dry
3-7-13 Nulton, Dengail O. & G. 3-G.. dry
35-8-13 Mooney, Wm. DeSoto 1..... abd
19-9-13 Frost Lbr. Co., Gibson & Johnson, Inc. 1 40
2-7-11 Johnson, J. E. Grandstaff 1.... 25
1-7-11 Jacobs, J. I. Hall 4..... dry
32-8-11 Pate, E. T. Kilgore 1..... dry
14-7-11 Clanan, Lyons & Neely 3..... dry
6-7-10 Williams, Magnolia Pet. 2..... 72
16-7-11 Andries, H. D. McDonald 1.... abd
31-8-10 Chadick, Ben Merritt, tr. 1.... dry
9-7-11 Ponder, E. F. Neely 2..... 125
5-7-13 Sepulbedo, Roberts & Sledge 1.. abd
33-8-13 Sabine Lbr. Co., Roberts & Sledge 3 ..... abd
10-7-11 Pearce, Sabine Prod. Co. 3.... dry
4-7-11 Turner, Ben F. Smith 2.....s.. dry
12-7-11 La. Long Leaf Lbr. Co., H. R. Smith 1 ..... abd
35-8-13 Pearce, Sneed & Sneed 1..... dry
30-8-11 Pruitt, Supreme Oil Co. 1..... 200
36-8-13 Gay, B. E. Taylor 1..... abd
36-8-13 Wooley, B. E. Taylor 1..... abd
12-7-11 Cutrer, A. F. Tarver 1..... dry
31-8-10 Williams, Coming Oil Co. 1... 600
5-7-13 Sepulbedo, A. A. Trammell 1.. abd
13-7-11 Williams, W. C. Turnbow 2-B.. 2000
3-7-13 Nulton, George Woolf 1..... 30
UNION PARISH
17-20-4e Fee, Southern Carbon 61..... gas

Gas production 5,000,000

Arkansas Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Clay	0	0	0	0	0	1	1
Cleburne ...	0	0	0	0	0	1	1
Columbia ..	0	0	0	0	0	1	1
Drew	0	0	0	0	0	1	1
Hot Springs.	1	0	1	0	0	0	0
Lafayette ...	0	0	0	0	2	1	3
Lincoln	0	0	0	0	0	1	1
Little River.	1	0	1	0	1	1	2
Logan	0	0	0	0	0	1	1
Miller	1	27	0	0	6	6	12
Ouachita ...	0	0	0	0	0	2	2
Pike	0	0	0	0	0	2	2
Prairie	0	0	0	0	1	0	1
St. Francis..	0	0	0	0	0	1	1
Union	0	0	0	0	3	6	9
Van Buren .	0	0	0	0	0	1	1
Washington .	0	0	0	0	0	2	2
Woodruff ...	0	0	0	0	1	0	1
Total Oct..	3	27	2	0	14	28	42
Total Sept.	5	0	4	1	9	28	37
Difference	2	27	2	1	5	0	5

WELLS COMPLETED
HOT SPRINGS COUNTY
11-5-16 Cunningham, Star Oil Co. 1.... dry
LITTLE RIVER COUNTY
25-12s-32w Taffee, Harrell-Stevens et al dry
MILLER COUNTY
33-15-26 Beck, Fitzwater et al 1..... 27

Mississippi Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	*Rgs.	Drlg.	Ttl.
Amite	0	0	0	0	0	1	1
Clarke	0	0	0	0	0	1	1
Hinds	1	0	0	1	0	2	2
Jasper	0	0	0	0	0	1	1
Lamar	0	0	0	0	1	1	2
Lowndes	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Newton	0	0	0	0	0	1	1
Rankin	1	0	0	1	2	3	6
Scott	0	0	0	0	0	1	1
Ttl. Oct. ...	2	0	0	2	4	13	17
Ttl. Sept. ..	4	500	1	2	3	12	15
Difference .	2	500	1	0	1	1	2

*Gas production: Hinds, 10,000,000 feet; Rankin, 40,000,000 feet; total, 50,000,000 feet.

WELLS COMPLETED
HINDS COUNTY
1-5n-1e Mayes, Jackson O. & G. Co. 4.. gas

Gas production 10,000,000

RANKIN COUNTY
6-5n-2e Hartfield, Love Pet. Co. 1..... gas

Gas production 40,000,000

Alabama Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Lamar	0	0	0	0	0	1	1
Mobile	0	0	0	0	0	1	1
Washington .	0	0	0	0	0	1	1
Total Oct..	0	0	0	0	0	3	3
Total Sept.	0	0	0	0	0	3	3
Difference	0	0	0	0	0	0	0

EAST TEXAS (BORDER COUNTIES)

	Comp.	Prod.	Dry	Gas	Rgs.	Drlg.	Ttl.
Bowie	0	0	0	0	0	5	5
Cass	0	0	0	0	0	4	4
Harrison	0	0	0	0	1	2	3
Marion	0	0	0	0	0	4	4
Panola	0	0	0	0	1	3	4
Shelby	0	0	0	0	0	8	8
Ttl. Oct. ...	0	0	0	0	2	26	28
Ttl. Sept. ..	0	0	0	0	2	26	28
Difference .	0	0	0	0	0	0	0

Rocky Mountain Area

MONTANA

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Carbon	1	495	0	0	1	7	8
Cascade	0	0	0	0	0	2	2
Glacier	1	0	0	1	3	12	15
Liberty	0	0	0	0	1	6	7
Petroleum ...	1	0	1	0	0	1	1
Pondera	1	0	1	0	0	2	2
Teton	0	0	0	0	0	3	3
Toole	5	50	3	1	3	11	14
Miscellaneous.	0	0	0	0	2	19	21
Total Oct. .	9	545	5	2	10	63	73
Total Sept. .	7	60	4	1	10	62	72
Difference .	2	485	1	1	0	1	1

WELLS COMPLETED
2-27-4w Farbo, Askalta Oil Co. 7 50
28-35-1w Lovnick, Napstad-Vander Pas, 4 ..... dry
12-35-3w Haugen, Eagle Oil Synd. 1 .. dry
11-35-3w Haugen, West Side Oil Synd. 1 ..... dry
29-35-2w Jarrett, Crumley et al 6 .... gas
31-27-3w Venetz, Adams-Bell Synd. 1. dry
7-11-31 Minnesota-Flatwillow 1 ..... dry
20-34-5w Peoples, Montana Power Co. 1 gas
12-7s-21 Caldwell, Ohio Oil Co. 8 495

Wells completed 9
Production 545
Gas 3,500,000
Dry and abandoned 5

WYOMING

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Big Horn	0	0	0	0	2	7	9
Carbon	0	0	0	0	1	5	6
Converse	0	0	0	0	0	6	6
Fremont	0	0	0	0	0	3	3
Hot Springs ..	0	0	0	0	0	2	2
Natrona	0	0	0	0	2	7	9
Niobrara	1	200	0	0	0	2	2
Park	0	0	0	0	1	4	5
Sweetwater ..	0	0	0	0	2	6	8
Sublet	0	0	0	0	1	7	8
Uinta	0	0	0	0	0	6	6
Weston	2	50	1	0	2	14	16
Miscellaneous.	0	0	0	0	1	10	11
Total Oct. .	3	250	1	0	12	79	91
Total Sept. .	9	245	4	0	12	77	89
Difference .	6	5	3	0	0	2	2

WELLS COMPLETED
15-46-64 Dakota-Wyoming Oil Co. 1 .. 50
15-46-64 General Oil Co. 1 ..... abd
32-36-65 Richards & Comstock, Ohio Oil Co. 2 200

Wells completed 3
Production 250
Dry and abandoned 1

COLORADO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Arapahoe	0	0	0	0	0	2	2
Boulder	0	0	0	0	0	3	3
Elbert	0	0	0	0	0	4	4
Fremont	0	0	0	0	0	4	4
La Plata	0	0	0	0	1	3	4
Larimer	0	0	0	0	1	12	13
Las Animas ..	1	0	0	1	1	3	4
Moffat	0	0	0	0	2	2	4
Morgan	0	0	0	0	1	2	3
Rio Blanco ..	0	0	0	0	0	3	3
Routt	0	0	0	0	1	2	3
Washington ..	1	0	1	0	1	0	1
Weld	0	0	0	0	1	9	10
Miscellaneous.	0	0	0	0	1	23	24
Total Oct. .	2	0	1	1	10	72	82
Total Sept. .	1	30	0	0	8	76	84
Difference .	1	30	1	1	2	4	2

WELLS COMPLETED
14-4s-56 Middlemist, Middlemist Oil Co. 1 ..... abd
33-33-62 Barela, Paul W. Harr 1 ..... gas

Wells completed 2
Gas 200,000
Dry and abandoned 1

NEW MEXICO

Summary of Field Operations

County—	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Chaves	0	0	0	0	1	1	2
De Baca	0	0	0	0	0	2	2
Eddy	0	0	0	0	1	6	7
Lea	2	994	0	0	5	10	15
McKinley	1	0	1	0	1	6	7
Rio Arriba ..	1	0	1	0	1	2	3
San Juan	0	0	0	0	1	7	8
San Miguel ..	0	0	0	0	1	3	4
Santa Fe	0	0	0	0	0	3	3
Valencia	0	0	0	0	1	2	3
Miscellaneous.	0	0	0	0	4	12	16
Total Oct. .	4	994	2	0	16	54	70
Total Sept. .	11	22,809	4	0	10	53	63
Difference .	7	21,815	2	0	6	1	7

WELLS COMPLETED
15-29-7w Governador Oil Co. 1 ..... abd
21-14-9w S. Dysart et al 1 ..... dry
8-21-36 State, Tidal Oil Co. 1 524
21-21-33 State, Texas Co. 3-A 470

Wells completed 4
Production 994
Dry and abandoned 2

UTAH

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Total Oct. ...	0	0	0	0	0	17	17
Total Sept. ..	0	0	0	0	0	17	17
Difference .	0	0	0	0	0	0	0

Eastern Fields

Summary of Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Bradford	47	60	0	0
Allegany	13	30	0	0
Venango-Clarion	6	5	2	1
Butler-Armstrong	3	2	0	1
Middle Field	2	3	0	0
N.Y.-Penns. Gas	3	0	2	1
S.W. Pennsylvania	13	24	3	2
Southeast Ohio	22	120	8	6
West Virginia	37	133	1	21
Total October	136	447	16	32
Total September	123	459	21	11
Difference	13	12	5	21

Summary of Rigs and Wells Drilling

Field—	Rigs	Dig.	Ttl.
Bradford	7	25	32
Allegany	1	3	4
Venango-Clarion	0	7	7
Butler-Armstrong	2	4	6
Middle Field	0	1	1
N.Y.-Pennsylvania gas	1	20	21
S.W. Pennsylvania	4	18	22
Southeast Ohio	8	25	33
West Virginia	19	61	80
Total October	42	164	206
Total September	39	152	191
Difference	3	12	15

WELLS COMPLETED

BRADFORD

Fee, Mix Creek Oil Co. 2
Fee, Mix Creek Oil Co. 2
Fee, E. D. Kepner Oil Co. 2
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. pressure
Fee, Forest Pet Corp. (6 wells) pressure
Fee, Forest Pet. Corp. 1
Fee, Forest Development Corp. pressure
Fee, Forest Development Corp. pressure
Quintuple, Haley Pet. Corp. 2
Hostetter, Hunter Oil Corp. 2
Quintuple, A. J. Foster 2
Fee, Venango Oil Co. 1
Robinson, Ball and Ryan 1
Weston, Bradford Prod. Co., Inc. pressure
Fee, F. and M. Roat 2
Fee, W. W. and W. E. Parmeter 2
Gill, J. H. Dempsey et al 3
Fee, Sloan and Zook Prod. Co. pressure
Fee, Sloan and Zook Prod. Co. pressure
Fee, C. A. McFadden 9
Franchot, E. R. Maxwell 2
Franchot, J. A. Madden 1
Fee, J. A. Walters estate 1
Bell, Minard Run Oil Co. pressure
Cram, Minard Run Oil Co. 1
Boviard, Benson and Benson 3
Farm 4,202, South Penn Oil Co. 2
Fee, Olean Pet. Co. 4
Booth, Medical Oil Co. 2
Fee, W. C. Middlebrough estate 1
Melvin, South Penn Oil Co. 4
Moore, H. J. Walters Oil Co. pressure
Farm 4,192, South Penn Oil Co. pressure
Farm 4,192, South Penn Oil Co. pressure
Farm 4,194, South Penn Oil Co. pressure
Borden, T. P. Thompson, Jr. 3
Artley, Bradford Prod. Co., Inc. pressure
Hazelwood, Sloan and Zook Oil Co. 2 1

Wells completed 47
Production 60
Pressure 18

ALLEGANY

Fee, Mary Lippert 1
Watters, Minderler and Phillips 1
Fee, Ryder Scott Co. 2
Fee, Forest Oil Corp. pressure
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Fee, Forest Oil Corp. 1
Fee, Citizens Natl. Bank of Wellsville et al pressure
Fee, Sawnett Oil Corp. 10
South Penn, Reeland et al 8
Karl, Karl-Weller Oil Corp. 2
Fee, J. M. Hughes et al 2

Wells completed 13
Production 30
Pressure 2

VENANGO-CLARION

Weaver, D. P. Weaver 1 1
Black, A. D. Shorts et al 1 dry
Boston, Lamberton National Bank 73 2
Fields, Thomas Cleas et al 13 dry
Clark, Robert and George Foggan 40 3
Sporer, Fryburg Motor Co. 5 gas

Wells completed 6
Production 5
Dry 2
Gas 1

BUTLER-ARMSTRONG

Grubbs, W. I. Gettman 1 gas
Fee, A. Affolter 20 1
McCullough, M. B. Finnessy 9 1

Wells completed 2
Production 2
Gas 1

MIDDLE FIELD

Fee, Sunny Oil Co. 2
New London, Morrison Bros. 30 1

Wells completed 2
Production 3

NEW YORK-PENNSYLVANIA GAS

WELLS COMPLETED

Clair, G. K. Rodgers No. 1 gas
Sheldon, S. J. Brendel dry
Eddy, Peterman et al dry

Wells completed 3
Dry 2
Gas 1

SOUTHWEST PENNSYLVANIA

WELLS COMPLETED

ALLEGHENY COUNTY

Noving, O. Miller 2 25
Guyer, Brooker & Co. 1 3
Hess, W. I. Gettman 1 gas

BUTLER COUNTY

Kelley, R. S. Steen & Co. 1 5
Grubbs, Gottman & Co. 1 gas
Smith Hartley, Hudson Bros. 1 dry

GREENE COUNTY

Lemons, Dunkard Valley O. & G. Co. 1 dry

WASHINGTON COUNTY

Clark, Bromley Bungard 1 3
Cox, E. H. Tague & Co. 1 4
Arnold, Rendall & Co. 1 dry
Hazlett, R. Orrill et al 2 50
Moore, E. H. Tague & Co. 1 2
McKennan, E. H. Tague & Co. 1 2

SOUHTEAST OHIO

WELLS COMPLETED

ATHENS COUNTY

Lynch, Robinson Bros. 1 gas
Stanley, Robinson Bros. 1 gas
Pickett, Standard Nat. Gas Co. 2 37

ASHLAND COUNTY

Black, C. A. Moore 2 1

COLUMBIANA COUNTY

Baker, Geo. B. Dolby 1 gas

GUERNSEY COUNTY

Miller heirs, George Jewell et al 1 60

HOLMES COUNTY

Clinage, Lydic Oil & Gas Co. 3 ½

JEFFERSON COUNTY

Baxter, Chas. A. Kelly et al 2 dry

MEDINA COUNTY

Broadsword, Curtis and Eaken 6 dry
Geisinger, E. R. Edson & Son Co. 5 dry
Mong, E. R. Edson & Son Co. 2 dry
Richards, Oko Oil & Gas Co. 3 5

MUSKINGUM COUNTY

Middleton, Hopewell Oil & Gas Co. 1 gas

MONROE COUNTY

Zwick, Lucas & Thornberry 1 10

NOBLE COUNTY

Crum, B. E. King 8 dry

PERRY COUNTY

Brown, Mid-East Gas Co. et al 1 gas
Rodgers, Huntington Nat. Bank. 27 6

VINTON COUNTY

Vinton County Infirmary, Wittmer O. & G. Properties 1 dry

WASHINGTON COUNTY

Barlow, J. E. Ripley et al 1 dry
Martin, J. T. Campbell 5 gas
Rowland, R. W. Turney et al 2 dry
Miller, R. J. Braden et al 1 1

WEST VIRGINIA

WELLS COMPLETED

BOONE COUNTY

Lewis heirs, Cambridge Gas Co. 3 gas

CABELL COUNTY

State Hospital, Phillip Hager et al 1 gas
Ben Lomond Land Co., C. C. Wolfe 4 gas
Freeman, C. C. Wolfe 1 gas
Ricketts, Merritts Creek Gas Co. 1 gas

CALHOUN COUNTY

Hershman, Creed Barker 1 gas
Riddle, F. F. McIntosh 4 gas
Gregg, South Penn Oil Co. 3 80
Haddox, W. Bickerstaff et al 2 gas

GILMER COUNTY

Engle, A. E. Ellis et al 1 40

KANAWHA COUNTY

Goshorn et al, Marshall & Price 1 gas
Goshorn heirs, Butler Co. Nat. Bank & Trust Co. 1 gas

LINCOLN COUNTY

Adkins, Woodall Gas Co. 3 gas
Mullens, C. McGhee et al 1 gas

MARION COUNTY

Ashcraft, J. J. Allen 1 gas
Moore, Victor Tennant 2 gas

RITCHIE COUNTY

Carpenter, King Knob Oil & Gas Co. 2 1
Pribble heirs, Southern Oil Co. 1 gas

ROANE COUNTY

Smith & Chewning, Bowers & Jackson 1 gas

TYLER COUNTY

McCullough, Raymond & McCullough 4 2

WAYNE COUNTY

Wilson heirs, Wayne United Gas Co. 40 gas
Baldwin, Wayne United Gas Co. 52 gas
Baldwin, Wayne United Gas Co. 53 gas
Newcomb, Wayne United Gas Co. 51 gas

WIRT COUNTY

Hall & Ackley, Paul Roberts 1 10
Higgins, Baker & Brian 1 dry

WETZEL COUNTY

Snodgrass, Null & Moorehead 5 gas

Lima Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Wood	0	0	0	0	1	2	3
Hancock	0	0	0	0	0	3	3
Allen	0	0	0	0	0	2	2
Auglaize	1	5	0	0	0	1	1
Sandusky	0	0	0	0	0	2	2
Mercer	2	1	1	0	0	0	0
Lucas	0	0	0	0	0	2	2
Ottawa	0	0	0	0	0	1	1
Darke	1	1	0	0	0	0	0
Seneca	4	0	0	4	0	6	6
Hardin	2	6	1	0	0	1	1
Shelby	1	0	1	0	0	0	0
Logan	0	0	0	0	0	1	1
Wyandot	2	360	0	0	0	6	6
Total Oct.	13	373	3	4	1	27	28
Total Sept.	13	122	1	8	1	27	28
Difference	0	251	2	4	0	0	0

WELLS COMPLETED

WOOD COUNTY

Liberty—Amelia Spooner, Wilson & Potter 1, 2, 3 abd
Bloom—F. D. Slotterbeck, Ohio Oil 22 abd

Abandoned 2

ALLEN COUNTY

Perry—Geo. W. Tabler, Ohio Oil 7 abd

AUGLAIZE COUNTY

Moulton—Harry J. Honold, Adrian Testar 3 5

SANDUSKY COUNTY

Jackson—C. Gilliard, Ohio Oil 2, 4, 5 abd
C. M. Sackett, Orval Good & Co. 5 abd
Washington—John A. Bork, Ohio Oil 1, 2 abd
S. Foster, Ohio Oil 1 abd
Scott—Noah Kline, Ohio Oil 4 abd
A. E. Stahl, Ohio Oil 3 abd

Abandoned 9

MERCER COUNTY

Granville—A. Rindler, O. G. Sellers 1 dry
Gibson—Adam Hening, Masters Oil & Dev. 2 1

Wells completed 2
Production 1
Dry 1

DARKE COUNTY

Allen—Herschel Beatty, Wm. Wilt, trustee, 1 1

SENECA COUNTY

Hopewell—H. W. Hunker, Industrial Oil & Gas 2 gas
Frank Fox, McPheron & Co. 3 gas
C. D. Knepper, J. H. Murphy & Son 4 gas
Liberty—G. C. Nighswander, F. W. Keiner & Foos 1 gas
Pleasants—C. B. and Ida L. Miller, Ohio Oil 2 abd

Wells completed 4
Gas 4
Abandoned 1

HARDIN COUNTY

Cessna—Grant Geiger, Wiser Oil 9 6
Blanchard—Geo. Schwemmer, Bert Sheldon 1 dry

Wells completed 2
Production 6
Dry 1

SHELBY COUNTY

Cynthian—J. H. Hurd, Ellerman Oil 1 dry

WYANDOT COUNTY

Crane—Margaret Brillhart, Jones & Coyle 1 300
Geo. Mann, Jones & Coyle 1 60

Wells completed 2
Production 360

Central Ohio Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ashland	2	5	0	1	1	2	3
Lorain	3	0	1	2	0	3	3
Medina	6	0	5	1	0	2	2
Knox	1	0	1	0	1	0	1
Fairfield	1	0	1	0	0	4	4
Coshocton	1	47	0	0	0	5	5
Summitt	0	0	0	0	0	1	1
Licking	1	0	0	1	2	5	7
Muskingum	2	4	0	1	1	9	10
Athens	4	10	0	3	1	6	7
Tuscarawas	1	50	0	0	1	2	3
Stark	6	0	1	5	5	23	28
Belmont	3	0	1	2	3	9	12
Guernsey	4	25	1	2	0	4	4
Trumbull	0	0	0	0	0	3	3
Crawford	0	0	0	0	0	1	1
Gallia	0	0	0	0	0	1	1
Scioto	0	0	0	0	0	1	1
Pike	0	0	0	0	0	2	2
Carroll	0	0	0	0	0	4	4
Huron	1	0	1	0	0	0	0
Total Oct.	36	141	12	18	15	87	102
Total Sept.	42	424	18	15	26	85	111
Difference	6	283	6	3	11	2	9

WELLS COMPLETED

ASHLAND COUNTY

Perry—Herb Austin, Stewart & Co. 4 gas
Mohican—Geo. W. Black, Moore & Co. 5 5

Wells completed 2
Production 5
Gas 1

ATHENS COUNTY

Waterloo—J. M. Pickett, Standard Nat. Gas Co. 2 10
Lee—D. C. Dickson, I. C. Robinson 2 gas
Ora Lunch, Robinson Bros. 1 gas
Berne—Thos. E. Dickson, Chestmar Oil & Gas 1 gas

Wells completed 4
Production 10
Gas 3

BELMONT COUNTY

Somerset—Stephens & Knox, A. C. Peters & Co. 1 gas
Union—Shutway-Murphy, Bradfield & Co. 1 gas
Alice M. Adams, O. K. Oil & Gas 2 dry

Wells completed 3
Dry 1
Gas 2

COSHOCTON COUNTY

Newcastle—D. S. Snider, H. E. Perkins 1 47

GUERNSEY COUNTY

Wheeling—Elmer E. Hamilton, E. C. Quillan & Co. 1 25
Frank L. Decker, Ohio Fuel Gas 1-5,672 gas
Oxford—Jennie Rose, J. F. Roach 1 gas
Monroe—J. P. Lanning, Geo. Jewell & Co. 1 dry

Wells completed 4
Production 25
Dry 1
Gas 3

HURON COUNTY

Greenwich—E. M. Palmer, Palmer & Co. 1 dry

KNOX COUNTY

Howard—Wm. Engle, Bonnett & Co. 2 dry

FAIRFIELD COUNTY

Berne—N. C. Hummel, City Nat. Gas Works 2 dry

LORAIN COUNTY

Carlisle—Howard J. Cox, Ohio Fuel Gas 1-5,674 gas
Niels Paulson, McMillan & Co. 1 gas
Eaton—Francis E. Morgan, Ramage & Willis 1 dry

Wells completed 3
Dry 1
Gas 2

LICKING COUNTY

Franklin—Milton Parr, Wehrle Gas 1 gas

MEDINA COUNTY

Chatham—Broadsword, Curtis & Eaken 6 dry
Dave E. Geisinger, Edson Sons & Co. 7 dry
Harrisville—Nettie Chapman, Ohio Fuel Gas 1-5,677 gas
G. P. Mong, Edson Son Co. 9, 10 dry
Joseph Funk, Barnhart & Co. 11 dry

Wells completed 6
Dry 5
Gas 1

MUSKINGUM COUNTY

Perry—L. M. Bryan, Atha Co. 5 4
Brush Creek—Bert Middleton, Hopewell Oil & Gas 1 gas

Wells completed 2
Production 4
Gas 1

STARK COUNTY

Jackson—T. K. Harris, East Ohio Gas 6 gas
L. & M. Reed, East Ohio Gas 1 gas
W. and C. Reikowski, Brendal Producing 1 gas
H. C. Rudy, Fulton Oil & Gas 1 gas
E. M. Sisler, Sisler & Co. 3 gas
Osnaburg—Sweitzer, Curry & DeWalt 1 dry

Wells completed 6
Dry 1
Gas 5

TUSCARAWAS COUNTY

Washington—T. B. and R. Shearer, Oxford Oil & Gas 1 50

Kentucky Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Ohio	19	538	2	1	0	16	16
Daviess	16	363	8	0	0	14	14
McLean	1	15	0	0	0	10	10
Hancock	3	60	1	0	4	8	12
Barren	0	0	0	0	0	2	2
Henderson	1	15	0	0	0	2	2
Muhlenberg	0	0	0	0	1	0	1
Hart	0	0	0	0	0	1	1
Taylor	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Bath	0	0	0	0	0	1	1
Christian	1	0	0	1	0	0	0
Breckenridge	0	0	0	0	0	1	1
Greene	0	0	0	0	1	1	2
Edmonson	0	0	0	0	0	1	1
Todd	0	0	0	0	0	1	1
Butler	0	0	0	0	2	0	2
Grayson	0	0	0	0	1	1	2
Clinton	1	15	0	0	0	0	0
Total Oct.	42	1,006	18	2	9	61	70
Total Sept.	62	1,075	19	8	10	54	64
Difference	20	69	1	6	1	7	6

WELLS COMPLETED

OHIO COUNTY

Hartford—Roy Owens, Goldberg & Co. 3 200
Hudson, Goldberg & Co. 1 30
Allen, L. C. Young 4 30
Allen, L. C. Young 5 40
Smith, Creek Drilling Co. 4 and 5 dry
Hart, Creek Drilling Co. 2 15
James Greer, B. & B. Oil Co. 6 3
I. T. Westerfield, Chester Oil 2 15
James Willis, Cumberland Pet. 1 dry
David Brooks, Cumberland Pet. 10 85
Kate Phillips, Brenner & Adams 1 dry
Arnold Howard, Clark, Snyder & Co. 1 dry
Floyd Keown, Morrison & Co. 1 dry
R. I. Miller, Fletcher & Co. 1 dry
Clara Hatfield, Felix Miles 1 dry
Whittaker heirs, Ohio Oil 10 gas
Tucker, Charles Leeper 1 125
I. T. Westerfield, H. L. Ogle & Co. 1 dry

Wells completed 19
Production 538
Dry 9
Gas 1

DAVIESS COUNTY

Owensboro—Albert Jackson, Brenner & Adams 10 20
J. T. Mayfield, S. M. Sherman 2 10
B. S. Jenkins, Est. Johnson Oil & Ref. Co. 2 60
Dr. A. Kirk, Creek Drilling Co. 1 dry
Ace Bratcher, Hupp, French & Co. 3. 18
Ace Bratcher, Hupp, French & Co. 6 50
James Tinsley, S. A. Cobb 2 100
Dell Salmon, Fred Hupp 4 dry
Austin Ramsey, J. C. Ellis & Co. 2 20
Chas. Bell, J. C. Miller, trustee, 9 dry
E. Jackson, Frank Cox & Co. 1 dry
Hugh Wimsatt, Mida McMahan 2 dry
J. C. Alsip, S. A. Sagle & Co. 1 85
Holbrook & Simpson, F. M. Ashby & Co. 1 dry
John Cootz, Creek Drilling Co. 1 dry
H. C. Holbert, Kentucky Nat. Gas 1 dry

Wells completed 16
Production 363
Dry 8

McLEAN COUNTY

Maxwell—Elmer Himes, Snowden-McSweeney 1 15

HANCOCK COUNTY

Pellville—John Smith, H. C. Smith 2 dry
Richards Hill—Elec Jackson, Hupp, Duff & Co. 5 20
Besse Fuqua, Chester Oil 2 30

Wells completed 3
Production 60
Dry 1

CHRISTIAN COUNTY

Hopkinsville—Petch, United Pet. Corp. 1 gas

CLINTON COUNTY

Browns Crossing—Pickens, Moore & Jones 1 15

Illinois Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	0	0	0	0	0	2	2
Coles	0	0	0	0	0	1	1
Crawford	2	5	1	0	1	4	5
Wabash	1	0	1	0	0	0	0
Bond	2	0	1	1	0	0	0
Boone	0	0	0	0	0	1	1
Jefferson	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Marion	0	0	0	0	0	1	1
Total Oct.	5	5	3	1	1	11	12
Total Sept.	10	0	9	1	1	13	14
Difference	5	5	6	0	0	2	2

WELLS COMPLETED

CRAWFORD COUNTY

Prairie—Herbert Brown, Dill & Co. 1 ... dry
Robinson—Abe Pleasant, Frank Allison & Co. 1 ... 5
Southwest—J. D. Waggoner, Ohio Oil 4 ... abd
Oblong—W. E. Mitchell, Ohio Oil 3 ... abd
C. Baldwin, Kewanee Oil Co. 12, 13, 14, 15 ... abd
M. Skaggs, Marks & Kraft 1 ... abd
John Wall, H. C. Kraft, 1, 2, 5, 6, 9 ... abd

Wells completed ... 2
Production ... 5
Dry ... 1
Abandoned ... 12

LAWRENCE COUNTY

Bridgeport—Aletha Griggs' No. 1, Ohio Oil 5, 6 ... abd
Lawrence—E. J. Seed, Big Four Oil & Gas 14 ... abd
Petty—H. D. Rigall's No. 2, Ohio Oil 1, 5 ... abd
J. W. Roderick, Ohio Oil 8 ... abd

Wells abandoned ... 6

WABASH COUNTY

Wabash—Howard Armstrong, J. W. Whiteside & Co. 5 ... dry
Howard Armstrong, J. W. Whiteside & Co. 1, 3 ... abd

Wells completed ... 3
Dry ... 1
Abandoned ... 3

BOND COUNTY

Lagrange—E. M. Gullick, L. A. Painter & Co. 1 ... dry
Dorris, Bond County Gas Co. 1 ... gas

Wells completed ... 2
Dry ... 1
Gas ... 1

Indiana Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Gibson	1	0	0	1	1	7	8
Pike	3	0	1	2	2	1	3
Sullivan	3	0	2	1	0	6	6
Daviess	1	0	1	0	0	4	4
Warrick	0	0	0	0	0	1	1
Vigo	0	0	0	0	0	3	3
Spencer	0	0	0	0	0	2	2
Perry	4	200	2	0	0	7	7
Knox	0	0	0	0	0	4	4
Marshall	0	0	0	0	1	1	2
Lagrange	0	0	0	0	0	1	1
Putnam	0	0	0	0	0	1	1
Posey	0	0	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Harrison	0	0	0	0	0	3	3
Hamilton	1	0	1	0	0	2	2
Dearborn	0	0	0	0	0	1	1
Greene	0	0	0	0	0	3	3
Switzerland	0	0	0	0	0	3	3
St. Joe	0	0	0	0	0	1	1
Rush	0	0	0	0	0	2	2
DeKalb	0	0	0	0	0	1	1
Pulaski	0	0	0	0	0	1	1
Elkhart	0	0	0	0	1	0	1
Orange	0	0	0	0	0	1	1
Johnson	0	0	0	0	0	1	1
Ohio	0	0	0	0	0	1	1
Laporte	1	0	1	0	0	0	0
Kosciusko	0	0	0	0	0	1	1
Henry	0	0	0	0	0	1	1
Vanderburg	0	0	0	0	1	4	5
Allen	0	0	0	0	0	1	1
Martin	0	0	0	0	0	1	1
Monroe	0	0	0	0	0	1	1
Stark	0	0	0	0	0	1	1
Tippecanoe	0	0	0	0	0	1	1
Total Oct.	14	200	8	4	6	71	77
Total Sept.	23	339	8	3	4	73	76
Difference	9	139	0	1	2	1	1

WELLS COMPLETED

GIBSON COUNTY

Columbia—L. W. and E. F. Gudgell, Knox Engineering Oil Corp. 1 ... gas

PIKE COUNTY

Washington—McCain, Tressler, Moore & Co. 1 ... gas
W. H. Smith, A. Vern Burdin 1 ... gas
Jefferson—Thos. H. Stone, Indiana Southwestern Gas 1 ... dry

Wells completed ... 3
Dry ... 1
Gas ... 2

SULLIVAN COUNTY

Turman—John Rose Est., Glendora Coal Co. 1 ... dry
H. H. Wilson, A. O. Thayer 1 ... dry
Curry—Willis Bradbury, Wyman & Brown 1 ... gas

Wells completed ... 3
Gas ... 1
Dry ... 2

DAVIESS COUNTY

Veale—S. Swan, Hartman & Co. 3 ... dry

PERRY COUNTY

Clark—Frank Cassidy, Conyers & Bugg 7 ... 100
James Thiery, Koerner Oil 1 ... dry
Troy—Rose Corsaro, Dr. C. C. Taliaferro, Jr., 1 ... dry
Bristow—Andrew Peters, Dr. C. C. Taliaferro, Jr. 1 ... 100

Wells completed ... 4
Production ... 200
Dry ... 2

HAMILTON COUNTY

Jackson—E. Applegate, Lantz-Miller, trustees, 1 ... dry

LaPORTE COUNTY

Willis—W. and C. Drollinger, V. S. Hollingsworth & Co. 1 ... dry

Michigan Fields

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drlg.	Ttl.
Muskegon	0	0	0	0	6	0	6
Isabella	4	170	0	1	2	3	10
Midland	16	4,642	1	0	14	19	33
Clare	0	0	0	0	2	1	3
Oceana	0	0	0	0	4	6	10
Lake	0	0	0	0	0	2	2
Cass	0	0	0	0	2	1	3
Kent	0	0	0	0	1	2	3
Emmett	0	0	0	0	0	1	1
Iosco	0	0	0	0	2	0	2
Eaton	0	0	0	0	1	0	1
Montmorency	0	0	0	0	3	0	3
Leelanau	0	0	0	0	1	0	1
Sanilac	0	0	0	0	3	0	3
Gratiot	0	0	0	0	3	1	4
Shiawassee	0	0	0	0	2	2	4
Allegan	0	0	0	0	0	4	4
Livingston	0	0	0	0	2	3	4
Oceolo	0	0	0	0	2	0	2
St. Clair	0	0	0	0	1	0	1
Alpena	0	0	0	0	1	0	1
Cheboygan	0	0	0	0	0	1	1
Kalamazoo	0	0	0	0	0	1	1
Oakland	0	0	0	0	0	1	1
Gennessee	0	0	0	0	1	0	1
St. Joe	0	0	0	0	1	0	1
Macomb	0	0	0	0	0	1	1
Saginaw	1	0	1	0	1	2	3
Newyago	0	0	0	0	0	2	2
Total Oct.	21	4,812	2	1	55	57	112
Total Sept.	29	12,113	12	0	63	59	122
Difference	8	7,301	10	1	8	2	10

WELLS COMPLETED

ISABELLA COUNTY

Broomfield—Bartlett-McClintic, Isabella Oil Dev. 2 ... gas
Vernon—L. G. Slenta, Romer C. Leonard, Trustee, 1 ... 50
Schug, John C. Arthus, Inc., 3 ... 45
Lynch, Mellon-Pollock Oil 1 ... 75

Wells completed ... 4
Production ... 170
Gas ... 1

MIDLAND COUNTY

Greendale—Iosco Land, Pure Oil A-4 ... 450
Geo. Lilly, Pure Oil 2 ... 50
Geo. Lilly, Pure Oil 3 ... 57
Jos. P. Moffett, Pure Oil 1 ... 5
Bemis-Bond, Pure Oil 1 ... 300
Geo. Purtell, Pure Oil 6 ... 50
Emma O. Reed, Pure Oil 5 ... 100
C. & G. Harnick, Pure Oil A-1 ... 1300
Nathan Kidder, Pure Oil 2 ... 75
Sult, W. L. McClanahan, Inc., 1 ... 245
N. J. Skinner, Gordon Oil B-5 ... 240
Nickerson, R. D. Malcolm 1 ... 125
State Land, Talbot Oil B-2 ... 1030
Wm. Schaeffer, G-Lee-P-Oil Dev. 2 ... 75
B. Rehmenschnider, L. G. Thompson A-2 ... 540
Midland—G. W. Patrick, J. L. Hickey 1 ... dry

Wells completed ... 16
Production ... 4642
Dry ... 1

SAGINAW COUNTY

Fremont—Clare Studer, Smith Pet. 1 ... dry

Agreement Reached on Slick Inheritance Tax

OIL CITY, Pa., Nov. 19.—Representatives of the T. B. Slick estate, the state of Oklahoma and the commonwealth of Pennsylvania met in Harrisburg this week for a final determination of settlement of transfer inheritance tax which has been in litigation since the death of Thomas B. Slick, millionaire oil operator of Clarion and Oklahoma, about two years ago.

Both Pennsylvania and Oklahoma claimed that the deceased made his residence in the respective states.

In the final adjustment brought about at Harrisburg, Oklahoma received $414,183.43, Pennsylvania $353,135.43 and the states of Kansas, Texas, Louisiana and Mississippi a combined sum of $8,862.86.

It was arranged that each state receive the tax on the value of the oil and gas property in that state held by the deceased and as a large part of the Slick holdings were in Oklahoma that state received the larger share.

Pennsylvania received her tax on the intangible holdings of the estate which amounted to approximately $7,000,000.

Federal inheritance tax on the estate amounted to $190,000 after all exemptions.

Summary of California Oil Field Operations for September

According to figures collected by the American Petroleum Institute, Pacific Coast office, the total production of crude oil in California for September amounted to 14,351,140 bbls., an average of 478,371 bbls. per day. This is a decrease of 337 bbls. per day under August production.

Total stocks of crude and all products in Pacific Coast territory decreased during the month 618,491 bbls. The total stocks at the end of the month were 169,908,222 bbls. Total stock increase for 1932, up to September 30, was 72,273 bbls.

Sixteen wells were completed during the month with an initial daily production of 5,393 bbls., compared with 12 wells completed during August with an initial production of 21,648 bbls.

CRUDE PETROLEUM PRODUCTION

(Figures of production and stocks are in barrels of 42 gallons)

	Barrels per month	Daily average Sept., 1932	Aug., 1932	Sept., 1931
Group No. 1:				
Coalinga	315,287	10,475	10,844	7,710
Elk Hills	371,156	12,372	12,286	12,261
Fruitvale	147,145	4,905	4,892	2,379
Kern River	260,022	8,667	8,927	10,288
Kettleman Hills—North Dome	1,775,191	59,173	60,287	61,817
Lost Hills—Belridge	256,970	8,566	8,615	9,330
McKittrick	52,750	1,758	1,853	1,853
Midway-Sunset	1,484,008	49,467	49,052	49,368
Mount Poso	232,500	7,750	8,177	9,089
Round Mountain	62,075	2,069	2,174	766
Wheeler Ridge	15,203	507	507	525
Group No. 2:				
Elwood	415,924	13,864	13,879	25,646
Rincon	55,225	1,841	1,526	1,869
San Miguelito	40,504	1,350	1,185	.....
Santa Barbara	14,209	474	586	560
Santa Maria	97,251	3,242	3,158	2,813
Summerland	3,387	113	114	151
Ventura Avenue	1,071,822	35,727	31,566	40,293
Ventura-Newhall	106,038	3,535	3,539	3,394
Watsonville	1,875	62	62	63
Group No. 3:				
Coyote	305,448	10,181	10,265	10,279
Domingues	515,776	17,192	17,605	10,615
Fullerton (Brea Olinda)	247,852	8,262	8,060	9,741
Huntington Beach	668,717	22,291	22,172	19,867
Inglewood	398,811	13,294	13,483	13,773
Lawndale	10,562	352	300	379
Long Beach	2,135,960	71,199	72,596	79,291
Los Angeles-Salt Lake	31,020	1,034	1,038	1,156
Montebello	180,620	6,021	6,045	6,321
Newport	.....	.....	.....	13
Playa Del Rey	421,600	14,387	14,695	22,254
Potrero	20,152	672	1,313	1,190
Richfield	184,871	6,162	6,203	6,284
Rosecrans	92,634	3,089	3,184	3,409
Santa Fe Springs	1,767,850	58,928	58,790	62,355
Seal Beach	362,391	12,080	12,318	11,632
Torrance	187,112	6,237	6,305	5,975
Whittier	32,192	1,073	1,167	1,311
Total September	14,351,140	478,371	478,708	506,020
Total August	14,839,951	478,708	.....	.....
Decrease	488,811	337	.....	.....

TOTAL STOCKS HELD BY CALIFORNIA OIL COMPANIES, BOTH INSIDE AND OUTSIDE THE UNITED STATES

	Sept. 30, 1932	Aug. 31, 1932	Sept. stock decreases	Sept. 30, 1931
Heavy crude and all grades of fuel, gas and Diesel oils	101,896,450	101,621,925	*274,525	100,516,134
Refinable crude	40,267,673	40,054,558	*213,115	41,792,375
Finished gasoline, engine distillate and natural gasoline	15,427,816	16,415,703	987,887	15,153,125
Crude gasoline and naphtha distillates	4,890,334	4,818,520	*71,814	2,783,534
All other stocks	†7,425,949	‡7,616,007	190,058	§9,432,102
Total all stocks	169,908,222	170,526,712	618,491	169,677,270

*Increase. Barrels of coke included.. †652,802 ‡660,386 ..... §663,902

OIL FIELD DEVELOPMENT

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abandoned wells Drillers	Abandoned wells Producers
Group No. 1:							
Coalinga	...	...	...	.....	640	..	..
Elk Hills	...	...	...	.....	183	..	..
Fruitvale	4	6	5	809	45	..	..
Kern River	...	...	...	.....	926	..	..
Kettleman North Dome	1	9	1	2,130	29	1	..
Lost Hills-Belridge	...	1	1	1,034	157	..	..
McKittrick	...	1	...	.....	111	..	..
Midway-Sunset	...	1	1	260	1,764	..	1
Mount Poso	...	2	1	105	88	..	..
Round Mountain	1	...	...	.....	16	..	..
Wheeler Ridge	...	...	...	.....	24	..	..
Group No. 2:							
Capitan	...	1	...	.....	.....	..	..
Elwood	...	...	...	.....	35	..	..
Rincon	...	1	1	250	33	..	..
San Miguelito	...	...	...	.....	2	..	..
Santa Barbara	...	...	1	279	7	..	..
Santa Maria	1	2	...	.....	169	1	..
Summerland	...	...	...	.....	64	..	..
Ventura Avenue	1	6	1	325	126	..	..
Ventura-Newhall	2	9	...	.....	430	..	..
Watsonville	...	...	...	.....	6	..	..
Group No. 3:							
Coyote	...	2	...	.....	85	..	..
Domingues	...	2	...	.....	42	..	..
Fullerton	...	...	...	.....	341	..	..
Huntington Beach	...	2	...	.....	369	..	1
Inglewood	...	1	...	.....	216	..	..
Lawndale	...	...	...	.....	6	..	..
Long Beach	3	8	2	391	943	2	1
Los Angeles-Salt Lake	...	...	...	.....	239	..	3
Montebello	...	...	...	.....	171	..	..
Playa Del Rey	...	2	...	.....	185	..	..
Potrero	...	3	...	.....	12	..	..
Richfield	...	...	...	.....	149	..	..
Rosecrans	...	1	...	.....	68	..	1
Santa Fe Springs	...	1	...	.....	501	..	..
Seal Beach	...	2	...	.....	105	..	1
Torrance	...	...	...	.....	377	..	..
Whittier	...	...	...	.....	141	..	..
Miscellaneous	4	34	...	.....	.....	7	..
Group No. 4:							
Buttonwillow gas field	1	1	2	gas	1	1	..
Dudley Ridge gas field	...	2	...	.....	.....	..	..
Total September	18	100	16	5,393	8,616	12	8
Total August	14	105	12	21,648	8,874	16	23
Decrease	*4	5	*4	16,255	58	4	15
Average for year 1931	22	207	21	30,270	8,911	20	15
Average for year 1930	80	434	63	48,710	9,632	21	27
Average for year 1929	109	610	76	100,625	10,550	26	18

*Increase.